ORDER

PROJECT IMPLEMENTATION PLAN FOR THE MAINTENANCE PROCESSOR SUBSYSTEM (MPS) ENHANCEMENTS



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DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

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FOREWORD

This order directs affected Federal Aviation Administration (FAA) organizations to take the action(s) necessary to implement Remote Maintenance Monitoring System (RMMS) Maintenance Processor Subsystem (MPS) enhancements, including related hardware and software. It identifies associated activities, responsibilities, schedules and funding. The implementation of enhancements to the MPS fulfills part of National Airspace System (NAS) Plan Project 6-01, Remote Maintenance Monitoring System. Management responsibility for this project has been assigned to the Maintenance Automation Program (map), Navigation/Landing and Facility Monitoring Division, APS-400. Support and coordination with other agency organizations is essential for the successful implementation of enhancements to the MPS.

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TABLE OF CONTENTS

		Page No.
CHAPTER 1.	GENERAL	
1. 2.	Purpose Distribution	1 1
3. 4-19.	Cancellation Reserved	1
CHAPTER 2.	PROJECT OVERVIEW	
20. 21.	Synopsis Purpose	3 3
22. 23-29.	History Reserved	3
CHAPTER 3.	PROJECT DESCRIPTION	
30. 31.	Functional Description	5
32.	Physical Description System Requirements	6
33.	Interfaces	15 19
34. 35.	MPS Enhancements Distribution Remote Maintenance Monitoring System	20
36-39.	Functions Reserved	24 28
CHAPTER 4.	PROJECT SCHEDULE AND STATUS	,
40. 41.	Project Schedules and General Status Milestone Schedule Summary	33
42.	Interdependencies and Sequence	33 34
43-49.	Reserved	34
CHAPTER 5.	PROJECT MANAGEMENT	
50. 51.	Project Management, General Project Contacts	35
52.	Project Coordination	36
53.	Project Responsibility Matrix	38 38
54.	Project Managerial Communications	38 38
55.	Implementation Staffing	42
56.	Planning and Reports	42
57.	Applicable Documents	42

		Page No
58. 59.	Contract Management Configuration Management	43 44
CHAPTER 6.	PROJECT FUNDING	
60. 61. 62-69.	Project Funding Status, General Regional Requirements Reserved	45 45 45
CHAPTER 7.	DEPLOYMENT	
70. 71. 72. 73. 74-79.	General Deployment Aspects Site Preparation Delivery Installation Plan Reserved	47 49 55 55 63
CHAPTER 8.	VERIFICATION	
80. 81. 82. 83. 84. 85. 86. 87. 88-89.	Factory Verification Checkout Contractor Integration Testing Contract Acceptance Inspection (CAI) FAA Integration Testing Shakedown and Changeover Joint Acceptance Inspection (JAI) Keysite Testing Reserved	65 65 66 66 66 67 67 68
CHAPTER 9.	INTEGRATED LOGISTIC SUPPORT	
90. 91. 92. 93. 94. 95. 96.	Maintenance Concept Training Support Tools and Test Equipment Supply Support Vendor Data and Technical Manuals Equipment Removal Facilities Reserved	69 69 72 72 73 73 74 74
CHAPTER 10.	ADDITIONAL PROJECT IMPLEMENTATION ASPECTS (RESERVED)	
APPENDIX 1	MPS Enhancement Installation Schedule (34 Pages)	1

•				Page No.
APPENDIX	2 MI	S Equ	ipment Removal List (20 Pages)	1
APPENDIX			or Layout Before and After MPS ment (80 Pages)	
	Figure	1-1.	Kansas City MPS Site # 1 - Before Enhancement	•
	Figure	1-2.	Kansas City MPS Site # 1 -	2
	Figure	2-1.	After Enhancement Los Angeles MPS Site # 2 -	3
	_		Before Enhancement	4
	Figure	2-2.	Los Angeles MPS Site # 2 - After Enhancement	5
	Figure	3-1.	Anchorage MPS Site # 3 - Before Enhancement	
	Figure	3-2.	Anchorage MPS Site # 3 -	6
	Figure	4-1	After Enhancement Chicago MPS Site # 4 -	7
	.		Before Enhancement	8
	Figure	4-2.	Chicago MPS SITE # 4 - After Enhancement	9
	Figure	5-1.	Atlanta MPS Site # 5 -	
	Figure	5-2.	Before Enhancement Atlanta MPS Site # 5 -	10
	_		After Enhancement	11
	Figure		Ft. Worth MPS Site # 6 - Before Enhancement	12
•	Figure	6-2.	Ft. Worth MPS Site # 6 - After Enhancement	13
	Figure	7-1.	San Juan MPS Site # 7 -	•
	Figure	7-2.	Before Enhancement San Juan MPS Site # 7 -	14
			After Enhancement	15
	Figure		Before Enhancement	16
	Figure	8-2.	Houston MPS Site # 8 - After Enhancement	17
	Figure	9-1.	Jacksonville MPS Site # 9 -	
	Figure	9-2.	Before Enhancement Jacksonville MPS Site # 9 -	18
•	Figure	10-1	After Enhancement Albuquerque MPS Site # 10 -	19
			Before Enhancement	20
	Figure	10-2.	Albuquerque MPS Site # 10 - After Enhancement	21
	Figure	11-1.	Miami MPS Site # 11 -	
			Before Enhancement	22

			Page No.
Figure	11-2.	Miami MPS Site # 11 -	
_		After Enhancement	23
Figure	12-1.	Oakland MPS Site # 12 -	
-		Before Enhancement	24
Figure	12-2.	Oakland MPS Site # 12 -	
_		After Enhancement	25
Figure	13-1.	Memphis MPS Site # 13 -	
		Before Enhancement	26
Figure	13-2.	Memphis MPS Site # 13 -	
_		After Enhancement	27
Figure	14-1.	Seattle MPS Site # 14 -	
_		Before Enhancement	28
Figure	14-2.	Seattle MPS Site # 14 -	
-		After Enhancement	29
Figure	15-1.	Honolulu MPS Site # 15 -	
_		Before Enhancement	30
Figure	15-2.	Honolulu MPS Site # 15 -	
_		After Enhancement	31
Figure	16-1.	Salt Lake City MPS Site # 16 -	
_		Before Enhancement	32
Figure	16-2.	Salt Lake City MPS Site # 16 -	
_		After Enhancement	33
Figure	17-1.	Denver MPS Site # 17 -	
_		Before Enhancement	34
Figure	17-2.	Denver MPS Site # 17 -	
_		After Enhancement	35
Figure	18-1.	Minneapolis MPS Site # 18 -	
-		Before Enhancement	36
Figure	18-2.	Minneapolis MPS Site # 18 -	
•		After Enhancement	37
Figure	19-1.	Indianapolis MPS Site # 19 -	
		Before Enhancement	38
Figure	19-2.	Indianapolis MPS Site # 19 -	
•		After Enhancement	39
Figure	20-1.	Cleveland MPS Site # 20 -	
_		Before Enhancement	40
Figure	20-2.	Cleveland MPS Site # 20 -	
		After Enhancement	41
Figure	21-1.	Washington (Leesburg) MPS Site	
7		# 21 - Before Enhancement	42
Figure	21-2.	Washington (Leesburg) MPS Site	
_		# 21 - After Enhancement	43
Figure	22-1.	New York MPS Site # 22 -	- -
-		Before Enhancement	44
Figure	22-2.	New York MPS Site # 22 -	- -
-		After Enhancement	45

		Page No.
Figure 23-	1. Boston MPS Site # 23 -	
	Before Enhancement	46
Figure 23-		
_	After Enhancement	47
Figure 24-	1. FAA Headquarters MPS Site # 24 -	
	Before Enhancement	48
Figure 24-	2. FAA Headquarters MPS Site # 24 -	
	After Enhancement	49
Figure 25-	1. FAA Technical Center (ACT-110)	
	MPS Site # 25 - Before Enhancement	50
Figure 25-	2. FAA Technical Center (ACT-110)	
	MPS Site # 25 (Delivery 1) -	
	After Enhancement	51
Figure 25-	3. FAA Technical Center (ACT-110)	
-	MPS Site # 25 (Delivery 2) -	
	After Enhancement	53
Figure 26-	1. FAA Technical Center (ASM-160)	
•	MPS Site # 26 - Before	
	Enhancement i	54
Figure 26-	2. FAA Technical Center (ASM-160)	
•	MPS Site # 26 - After Enhancement	55
Figure 27-	1. Mike Monroney Aeronautical Center	
•	(AAC-940) MPS Site # 27 - Before	
	Enhancement	56
Figure 27-		
-	(AAC-940) MPS Site # 27 - After	
	Enhancement	57
Figure 28-	1. Mike Monroney Aeronautical Center	
-	(ASM-150) MPS Site # 28 - Before	
	Enhancement	58
Figure 28-	2. Mike Monroney Aeronautical Center	
-	(ASM-150) MPS Site # 28 - After	
	Enhancement	59
Figure 29-	1. Dallas/Ft. Worth MPS Site # 29 -	
	Before Enhancement	60
Figure 29-	2. Dallas/Ft. Worth MPS Site # 29 -	Ţ - ,
•	After Enhancement	61
Figure 30-	1. Memphis MPS Site # 30 - Before	
	Enhancement	62
Figure 30-		- -
•	Enhancement	63
Figure 31-	1. Norfolk MPS Site # 31 - Before	
	Enhancement	64

				Page No.
,	Figure	31-2.	Norfolk MPS Site # 31 - After Enhancement	65
	Figure		Windsor Locks MPS Site # 32 - Before Enhancement	66
	Figure		Windsor Locks MPS Site # 32 - After Enhancement	67
	Figure		Detroit MPS Site # 33 - Before Enhancement	68
	Figure		Detroit MPS Site # 33 - After Enhancement	69
	Figure	34-1.	St. Louis MPS Site # 34 - Before Enhancement	70
	Figure		St. Louis MPS Site # 34 - After Enhancement	71
	Figure		Wichita MPS Site # 35 - Before Enhancement	72
	Figure		Wichita MPS Site # 35 - After Enhancement	73
	Figure		Denver MPS Site # 36 - Before Enhancement	74
	Figure		Denver MPS Site # 36 - After Enhancement	75
,	Figure		Edwards AFB MPS Site # 37 - Before Enhancement	76
	Figure		Edwards AFB MPS Site # 37 - After Enhancement	77
	Figure		Fairbanks MPS Site # 38 - Before Enhancement	78
	Figure	38-2.	Fairbanks MPS Site # 38 - After Enhancement	79
APPENDIX	La	PS Syst ayouts L46 Pag	em Cabinet Board Listings and Before and After MPS Enhancement es)	
	Figure		Kansas City MPS Site # 1 System Cabinet 1 CPU Chassis Board Listing - Before Enhancement	1
	Figure	1-2.	Kansas City MPS Site # 1 System Cabinet 1 I/O Chassis Board Listing - Before Enhancement	2
	Figure	1-3.	Kansas City MPS Site # 1 System Cabinet 2 CPU and I/O Chassis Board	
	Figure		Listing - Before Enhancement Kansas City MPS Site # 1 System Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement	

			Page No.
Figure	1-5.	Kansas City MPS Site # 1 System Cabinet 2 CPU and I/O Chassis Board	
Figure	2-1.	Layout - After Enhancement Los Angeles MPS Site # 2 System Cabinet CPU Chassis Board Listing -	5
Figure	2-2.	Before Enhancement Los Angeles MPS Site # 2 System	6
y		Cabinet I/O Chassis Board Listing - Before Enhancement	7
Figure	2-3.	Los Angeles MPS Site # 2 System Cabinet 1 CPU and I/O Chassis Board	
Figure	2-4.	Layout - After Enhancement Los Angeles MPS Site # 2 System Cabinet 2 CPU and I/O Chassis Board	8
Figure	3-1.	Layout - After Enhancement Anchorage MPS Site # 3 System	9
m:	2 2	Cabinet CPU Chassis Board Listing - Before Enhancement	10
Figure	3-2.	Anchorage MPS Site # 3 System Cabinet I/O Chassis Board Listing - Before Enhancement	11
Figure	3-3.	Anchorage MPS Site # 3 System Cabinet 1 CPU and I/O Chassis Board	
Figure	3-4.	Layout - After Enhancement Anchorage MPS Site # 3 System Cabinet 2 CPU and I/O Chassis	12
Figure	4-1.	Board Layout - After Enhancement Chicago MPS Site # 4 System Cabinet	13
Figure	4-2	CPU Chassis Board Listing - Before Enhancement Chicago MDS Site # 4 System Cobinet	14
Figure	4-2.	Chicago MPS Site # 4 System Cabinet I/O Chassis Board Listing - Before Enhancement	1 5
Figure	4-3.	Chicago MPS Site # 4 System Cabinet 1 CPU and I/O Chassis	
Figure	4-4.	Board Layout - After Enhancement Chicago MPS Site # 4 System Cabinet 2 CPU and I/O Chassis Board	16
Figure	5-1.	Layout - After Enhancement Atlanta MPS Site # 5 System Cabinet	17
Figure	5 2	CPU Chassis Board Listing - Before Enhancement	18
rigure	J-4.	Atlanta MPS Site # 5 System Cabinet I/O Chassis Board Listing - Before Enhancement	19

	<u>r</u> c	age No
Figure 5-3.	Atlanta MPS Site # 5 System Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement	20
Figure 5-4.	Atlanta MPS Site # 5 System Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement	21
Figure 6-1.		22
Figure 6-2.		23
Figure 6-3.	Ft. Worth MPS Site # 6 System Cabinet 1 CPU and I/O Chassis Board	
Figure 6-4.	Cabinet 2 CPU and I/O Chassis	24
Figure 7-1.	Board Layout - After Enhancement San Juan MPS Site # 7 System Cabinet CPU Chassis Board Listing -	25
Figure 7-2.	Before Enhancement	26
Figure 7-3.	Cabinet 1 CPU and I/O Chassis Board	27
Figure 7-4.	Layout - After Enhancement San Juan MPS Site # 7 System Cabinet 2 CPU and I/O Chassis Board	28
Figure 8-1.	Layout - After Enhancement Houston MPS Site # 8 System Cabinet CPU Chassis Board Listing -	29
Figure 8-2.	Before Enhancement	30
Figure 8-3.	Before Enhancement Houston MPS Site # 8 System	31
Figure 8-4.	Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement Houston MPS Site # 8 System	32
•	Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement	33
Figure 9-1.	Cabinet CPU Chassis Board Listing - Before Enhancement	34

			<u>Page</u>	No
Figure	9-2.	Jacksonville MPS Site # 9 System Cabinet I/O Chassis Board		
		Listing - Before Enhancement	35	5
Figure	9-3.	Jacksonville MPS Site # 9 System		
		Cabinet 1 CPU and I/O Chassis Board		
_		Layout - After Enhancement	36	5
Figure	9-4.	Jacksonville MPS Site # 9 System		
		Cabinet 2 CPU and I/O Chassis Board		
_ •		Layout - After Enhancement	37	7
Figure	10-1.	Albuquerque MPS Site # 10 System		
		Cabinet CPU Chassis Board		
		Listing - Before Enhancement	38	3
Figure	10-2.	Albuquerque MPS Site # 10 System		
		Cabinet I/O Chassis Board		
5 .		Listing - Before Enhancement	39)
Figure	10-3.			
		Cabinet 1 CPU and I/O Chassis		
TI	20.4	Board Layout - After Enhancement	40)
Figure	10-4.			
		Cabinet 2 CPU and I/O Chassis		
Figure		Board Layout - After Enhancement	41	
Figure	11-1.			
		CPU Chassis Board Listing -		
Figure	11-0	Before Enhancement	42	
rigure	11-2.	Miami MPS Site # 11 System Cabinet		
		I/O Chassis Board Listing -		
Figure	11_3	Before Enhancement	43	
rigure	11-2.		•	
		Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement		
Figure	11-4	Miami MPS Site # 11 System Cabinet	44	
ragure	11 7.	2 CPU and I/O Chassis Board		
-		Layout - After Enhancement		
Figure	12-1.	Oakland MPS Site # 12 System	45	
	,	Cabinet CPU Chassis Board		
		Listing - Before Enhancement	46	
Figure	12-2.	Oakland MPS Site # 12 System	40	
.		Cabinet I/O Chassis Board		
		Listing - Before Enhancement	47	
Figure	12-3.	Oakland MPS Site # 12 System	4/	
•		Cabinet 1 CPU and I/O Chassis		
•		Board Layout - After Enhancement	48	
Figure	12-4.	Oakland MPS Site # 12 System	40	
-		Cabinet 2 CPU and I/O Chassis		
		Board Layout - After Enhancement	49	

		Page No.
Figure 13-1.	Memphis MPS Site # 13 System Cabinet CPU Chassis Board	
Figure 13-2.	Listing - Before Enhancement	50
rigure 13-2.	Cabinet I/O Chassis Board	
	Listing - Before Enhancement	51
Figure 13-3.	Memphis MPS Site # 13 System	
- ··· 3	Cabinet 1 CPU and I/O Chassis	
	Board Layout - After Enhancement	52
Figure 13-4.	Memphis MPS Site # 13 System	
	Cabinet 2 CPU and I/O Chassis	E 2
	Board Layout - After Enhancement	53
Figure 14-1.	Seattle MPS Site # 14 System	
	Cabinet CPU Chassis Board	54
m!	Listing - Before Enhancement Seattle MPS Site # 14 System	34
Figure 14-2.	Cabinet I/O Chassis Board	
	Listing - Before Enhancement	55
Figure 14-3.	Seattle MPS Site # 14 System	
rigule 14 5.	Cabinet 1 CPU and I/O Chassis	
	Board Layout - After Enhancement	56
Figure 14-4.	Seattle MPS Site # 14 System	
	Cabinet 2 CPU and I/O Chassis	
	Board Layout - After Enhancement	57
Figure 15-1.	Honolulu MPS Site # 15 System	
_	Cabinet CPU Chassis Board	
	Listing - Before Enhancement	58
Figure 15-2.	Honolulu MPS Site # 15 System	
	Cabinet I/O Chassis Board	59
	Listing - Before Enhancement	39
Figure 15-3.	Honolulu MPS Site # 15 System Cabinet 1 CPU and I/O Chassis	
*	Board Layout - After Enhancement	60
Figure 15-4.		•
rigure 15-4.	Cabinet 2 CPU and I/O Chassis	
	Board Layout - After Enhancement	61
Figure 16-1.	Salt Lake City MPS Site # 16	
	System Cabinet CPU Chassis Board	
	Listing - Before Enhancement	62
Figure 16-2.	Salt Lake City MPS Site # 16	
-	System Cabinet I/O Chassis Board	
	Listing - Before Enhancement	63
Figure 16-3.	Salt Lake City MPS Site # 16	
	System Cabinet 1 CPU and I/O	
	Chassis Board Layout - After	64
	Enhancement	0-4

			Page No.
Figure	16-4.	Salt Lake City MPS Site # 16 System Cabinet 2 CPU and I/O Chassis Board Layout - After	
		Enhancement	65
Figure	17-1.		
Figure	17-2.	Listing - Before Enhancement Denver MPS Site # 17 System	66
		Cabinet I/O Chassis Board Listing - Before Enhancement	67
Figure	17-3.	Cabinet 1 CPU and I/O Chassis	
Figure	17-4.	Board Layout - After Enhancement Denver MPS Site # 17 System Cabinet 2 CPU and I/O Chassis	68
Figure	18-1.	Board Layout - After Enhancement Minneapolis MPS Site # 18 System	69
		Cabinet CPU Chassis Board Listing - Before Enhancement	70
Figure	18-2.	Minneapolis MPS Site # 18 System Cabinet I/O Chassis Board	
Figure	18-3.	Listing - Before Enhancement Minneapolis MPS Site # 18 System Cabinet 1 CPU and I/O Chassis	71
Figure	18-4.	Board Layout - After Enhancement Minneapolis MPS Site # 18 System	72
Figure	19-1	Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement Indianapolis MPS Site # 19 System	73
rigure	19 1.	Cabinet CPU Chassis Board Listing - Before Enhancement	74
Figure	19-2.		
Figure	19-3.	Listing - Before Enhancement Indianapolis MPS Site # 19 System	75
Figure	19-4.	Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement Indianapolis MPS Site # 19 System	76
		Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement	77
Figure	20-1.	Cleveland MPS Site # 20 System Cabinet CPU Chassis Board	
Figure	20-2.	Listing - Before Enhancement Cleveland MPS Site # 20 System Cabinet I/O Chassis Board	78
		Cabinet I/O Chassis Board Listing - Before Enhancement	79

			<u>Page</u>	No.
Figure 20	0-3.	Cleveland MPS Site # 20 System Cabinet 1 CPU and I/O Chassis		
Figure 20	0-4.	Board Layout - After Enhancement Cleveland MPS Site # 20 System Cabinet 2 CPU and I/O Chassis	80	0
Figure 2:	1-1.	Board Layout - After Enhancement Washington (Leesburg) MPS Site # 21 System Cabinet CPU Chassis	81	1
Figure 2	1-2.	Board Listing - Before Enhancement Washington (Leesburg) MPS Site	: 83	2
Figure 2	1-3.	<pre># 21 System Cabinet I/O Chassis Board Listing - Before Enhancement Washington (Leesburg) MPS Site</pre>	83	3
		# 21 System Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement	84	1
Figure 2:	1-4.	Washington (Leesburg) MPS Site # 21 System Cabinet 2 CPU and I/O Chassis Board Layout - After		
Figure 22	2-1.	Enhancement New York MPS Site # 22 System Cabinet CPU Chassis Board	85	5
Figure 22	2-2.	Listing - Before Enhancement New York MPS Site # 22 System	86	5
Figure 22	2-3.	Cabinet I/O Chassis Board Listing - Before Enhancement New York MPS Site # 22 System	87	7
Figure 22	2-4.	Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement New York MPS Site # 22 System	88	3
		Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement	89	€
Figure 23		Boston MPS Site # 23 System Cabinet CPU Chassis Board Listing - Before Enhancement	90)
Figure 23	3-2.	Boston MPS Site # 23 System Cabinet I/O Chassis Board Listing - Before Enhancement	91	<u>l</u>
Figure 23	3-3.	Boston MPS Site # 23 System Cabinet 1 CPU and I/O Chassis Board Layout - After Enhancement	92)
Figure 23	3-4.	Boston MPS Site # 23 System Cabinet 2 CPU and I/O Chassis		
Figure 24	4-1.	Board Layout - After Enhancement FAA Headquarters MPS Site # 24 System Cabinet CPU Chassis Board	93	3
		Listing - Before Enhancement	94	1

			<u>Page</u>	No.
Figure	24-2.	FAA Headquarters MPS Site # 24 System Cabinet I/O Chassis Board		
Figure	24-3.	Listing - Before Enhancement FAA Headquarters MPS Site # 24 System Cabinet 1 CPU and I/O	95	i
Figure	24-4.	Chassis Board Layout - After Enhancement FAA Headquarters MPS Site # 24	96	.
		System Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement	97	
Figure	25-1.	FAA Technical Center (ACT-110) MPS Site # 25 System Cabinet CPU Chassis Board Listing - Before		
Figure	25-2.	Enhancement FAA Technical Center (ACT-110) MPS Site # 25 System Cabinet I/O	98	
Figure	25-3.	Chassis Board Listing - Before Enhancement FAA Technical Center (ACT-110) MPS		
Figure	25-4	Site # 25 System Cabinet 1 CPU and I/O Chassis Board Layout (Delivery 1) - After Enhancement	100	
rigure	25-4.	FAA Technical Center (ACT-110) MPS Site # 25 System Cabinet 2 CPU and I/O Chassis Board Layout		
Figure	25-5.	(Delivery 1) - After Enhancement FAA Technical Center (ACT-110) MPS Site # 25 System Cabinet 1 CPU and I/O Chassis Board Layout		
Figure	25-6.	(Delivery 2) - After Enhancement FAA Technical Center (ACT-110) MPS Site # 25 System Cabinet 2 CPU and I/O Chassis Board Layout	102	
Figure	25-7.	(Delivery 2) - After Enhancement FAA Technical Center (ACT-110) MPS Site # 25 System Cabinet 3 CPU and I/O Chassis Board Layout	103	
Figure	26-1.	(Delivery 2) - After Enhancement FAA Technical Center (ASM-160) MPS Site # 26 System Cabinet CPU Chassis Board Listing -	104	
Figure	26-2.	Before Enhancement FAA Technical Center (ASM-160) MPS Site # 26 System Cabinet I/O	105	
		Chassis Board Listing - Before Enhancement	106	

	1	Page No.
Figure 26-3.	FAA Technical Center (ASM-160) MPS Site # 26 System Cabinet 1 CPU and I/O Chassis Board Layout -	
Figure 26-4.	After Enhancement	107
Figure 27-1.	After Enhancement	108
Figure 27-2.	Listing - Before Enhancement	109
Figure 27-3.	Listing - Before Enhancement	110
Figure 27-4.	Board Layout - After Enhancement	111
Figure 28-1.	Board Layout - After Enhancement	112
Figure 28-2.	Listing - Before Enhancement Mike Monroney Aeronautical Center (ASM-150) MPS Site # 28 System	113
Figure 28-3.	Cabinet I/O Chassis Board Listing - Before Enhancement Mike Monroney Aeronautical Center (ASM-150) MPS Site # 28 System Cabinet 1 CPU and I/O Chassis	114
Figure 28-4.	Board Layout - After Enhancement Mike Monroney Aeronautical Center (ASM-150) MPS Site # 28 System	115
Figure 29-1.	Cabinet 2 CPU and I/O Chassis Board Layout - After Enhancement Dallas/Ft. Worth MPS Site # 29 System Cabinet CPU Chassis Board	116
Figure 29-2.	Listing - Before Enhancement Dallas/Ft. Worth MPS Site # 29 System Cabinet I/O Chassis Board	117
	Listing - Before Enhancement	118

		Page No.
Figure 29-3.	Dallas/Ft. Worth MPS Site # 29 System Cabinet CPU and I/O	,
	Chassis Board Layout - After Enhancement	119
Figure 30-1.	Memphis MPS Site # 30 System Cabinet CPU Chassis Board	
Figure 30-2.	Listing - Before Enhancement Memphis MPS Site # 30 System Cobinet I/O Chargin Board	120
Figure 30-3.	Cabinet I/O Chassis Board Listing - Before Enhancement Memphis MPS Site # 30 System	121
	Cabinet CPU and I/O Chassis Board Layout - After Enhancement	122
Figure 31-1.	Norfolk MPS Site # 31 System Cabinet CPU Chassis Board	
Figure 31-2.	Listing - Before Enhancement Norfolk MPS Site # 31 System Cabinet I/O Chassis Board	123
Figure 31-3.	Listing - Before Enhancement Norfolk MPS Site # 31 System	124
	Cabinet CPU and I/O Chassis Board Layout - After Enhancement	125
Figure 32-1.	Windsor Locks MPS Site # 32 System Cabinet CPU Chassis Board	
Figure 32-2.	Listing - Before Enhancement Windsor Locks MPS Site # 32	126
Figure 32-3.	System Cabinet I/O Chassis Board Listing - Before Enhancement Windsor Locks MPS Site # 32	127
	System Cabinet CPU and I/O Chassis Board Layout - After	
Figure 33-1.	Enhancement Detroit MPS Site # 33 System Cabinet CPU Chassis Board	128
Figure 33-2.	Listing - Before Enhancement Detroit MPS Site # 33 System	129
	Cabinet I/O Chassis Board Listing - Before Enhancement	130
Figure 33-3.	Detroit MPS Site # 33 System Cabinet CPU and I/O Chassis Board	
Figure 34-1.	Layout - After Enhancement St. Louis MPS Site # 34 System Cabinet CPU Chassis Board	131
Figure 34-2.	Listing - Before Enhancement St. Louis MPS Site # 34 System	132
	Cabinet I/O Chassis Board Listing - Before Enhancement	133

		Page No.
Figure 34-3.	St. Louis MPS Site # 34 System Cabinet CPU and I/O Chassis Board	
	Layout - After Enhancement	134
Figure 35-1.	Wichita MPS Site # 35 System	134
rigure 33 i.	Cabinet CPU Chassis Board	
	Listing - Before Enhancement	135
Figure 35-2.	Wichita MPS Site # 35 System	135
rigure 35-2.		
	Cabinet I/O Chassis Board	106
	Listing - Before Enhancement	136
Figure 35-3.	Wichita MPS Site # 35 System	
	Cabinet CPU and I/O Chassis Board	
	Layout - After Enhancement	137
Figure 36-1.	Denver MPS Site # 36 System	
	Cabinet CPU Chassis Board	
	Listing - Before Enhancement	138
Figure 36-2.	Denver MPS Site # 36 System	
	Cabinet I/O Chassis Board	
	Listing - Before Enhancement	139
Figure 36-3.	Denver MPS Site # 36 System	
	Cabinet CPU and I/O Chassis Board	
	Layout - After Enhancement	140
Figure 37-1.	Edwards AFB MPS Site # 37 System	
	Cabinet CPU Chassis Board	
	Listing - Before Enhancement	141
Figure 37-2.	Edwards AFB MPS Site # 37 System	
-	Cabinet I/O Chassis Board	
	Listing - Before Enhancement	142
Figure 37-3.	Edwards AFB MPS Site # 37 System	
-	Cabinet CPU and I/O Chassis Board	
	Layout - After Enhancement	143
Figure 38-1.	Fairbanks MPS Site # 38 System	
J	Cabinet CPU Chassis Board	
•	Listing - Before Enhancement	144
Figure 38-2.	Fairbanks MPS Site # 38 System	
	Cabinet I/O Chassis Board	
	Listing - Before Enhancement	145
Figure 38-3.	Fairbanks MPS Site # 38 System	140
	Cabinet CPU and I/O Chassis Board	
	Lavout - After Enhancement	146

	ı		<u>P</u>	age No.
APPENDIX	E U	attery	anels, Patch Panel Inserts, and Backup and I/O Power Supply Before and After MPS Enhancement es)	
	Figure	1-1.	Kansas City MPS Site #1 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	
	Figure	2-1.	Supply Units Los Angeles MPS Site #2 Placement of Patch Panels, Patch Panel Inserts,	4
	Figure	3-1.	and Battery Backup and I/O Power Supply Units Anchorage MPS Site #3 Placement of	5
			Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power Supply Units	6
	Figure	4-1.	Chicago MPS Site # 4 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	
	Figure	5-1.	Supply Units Atlanta MPS Site # 5 Placement of Patch Panels, Patch Panel Inserts, and Pattony Packup and I/O Power	7
	Figure	6-1.	and Battery Backup and I/O Power Supply Units Ft. Worth MPS Site # 6 Placement of Patch Panels, Patch Panel Inserts, and Pattern Backup and I/O Paren	8
·	Figure	7-1.	and Battery Backup and I/O Power Supply Units San Juan MPS Site # 7 Placement of Patch Panels, Patch Panel Inserts,	9
	Figure	8-1.	and Battery Backup and I/O Power Supply Units Houston MPS Site # 8 Placement of Patch Panels, Patch Panel Inserts,	10
	Figure	9-1.	and Battery Backup and I/O Power Supply Units Jacksonville MPS Site # 9 Placement of Patch Panels, Patch Panel	11
	Figure	10-1.	Inserts, and Battery Backup and I/O Power Supply Units Albuquerque MPS Site # 10 Placement of Patch Panels, Patch Panel	12
			Inserts, and Battery Backup and I/O	1 2

	<u>.</u>	Page No.
Figure 11-1.	Miami MPS Site # 11 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	
Figure 12-1.	Supply Units Oakland MPS Site # 12 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	14
Figure 13-1.	Supply Units Memphis MPS Site # 13 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	15
Figure 14-1.	Supply Units Seattle MPS Site # 14 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	16
Figure 15-1.	Supply Units Honolulu MPS Site # 15 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	17
Figure 16-1.	Supply Units	18
Figure 17-1.	and I/O Power Supply Units Denver MPS Site # 17 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O Power	19
Figure 18-1.	Supply Units Minneapolis MPS Site # 18 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup and I/O	
Figure 19-1.	Power Supply Units Indianapolis MPS Site # 19 Placement of Patch Panels, Patch Panel Inserts, and Battery Backup	21
Figure 20-1.	and I/O Power Supply Units Cleveland MPS Site # 20 Placement of Patch Panels, Patch Panel	22
Figure 21-1.	Inserts, and Battery Backup and I/O Power Supply Units Washington MPS Site # 21 Placement of Patch Panels, Patch Panel	23
	Inserts, and Battery Backup and I/O Power Supply Units	24

	<u>Page</u>	No.
Patch Panels	Site # 22 Placement of , Patch Panel Inserts, Backup and I/O Power	
Supply Units Figure 23-1. Boston MPS St	2! ite # 23 Placement of , Patch Panel Inserts,	5
Supply Units Figure 24-1. FAA Headquart	Backup and I/O Power 20 ters MPS Site # 24	6
Panel Inserts and I/O Power	Patch Panels, Patch s, and Battery Backup r Supply Units 2	7
Figure 25-1. FAA Technical MPS Site # 25 Panels, Patch	l Center (ACT-110) 5 Placement of Patch h Panel Inserts, and up and I/O Power	
Figure 25-2. FAA Technical MPS Site # 25 Panels, Patch		9
Units (Delive Figure 26-1. FAA Technical MPS Site # 26 Panels, Patch		0
Supply Units Figure 27-1. Mike Monrones (AAC-940) MPS of Patch Pane	32 y Aeronautical Center S Site # 25 Placement els, Patch Panel Battery Backup and	2
I/O Power Sup Figure 28-1. Mike Monrone (ASM-150) MPS of Patch Pane	oply Units y Aeronautical Center S Site # 25 Placement els, Patch Panel Battery Backup and	3
I/O Power Sup Figure 29-1. Dallas/Ft. Wo Placement of Panel Inserts	oply Units 34 orth MPS Site # 29 Patch Panels, Patch s, and Battery Backup	4
Figure 30-1. Memphis MPS S Placement of	r Supply Units 35 Site # 30 Patch Panels, Patch s, and Battery Backup	5
and I/O Power	r Supply Units 36	5

•	Page No.
Figure 31-1. Norfolk MPS Site # 31 Placement of Patch Panels, Patch	
Panel Inserts, and Battery Backup	
and I/O Power Supply Units Figure 32-1. Windsor Locks MPS Site # 32	37
Figure 32-1. Windsor Locks MPS Site # 32 Placement of Patch Panels, Patch	
Panel Inserts, and Battery Backup	
and I/O Power Supply Units	38
Figure 33-1. Detroit MPS Site # 33 Placement of Patch Panels, Patch	
Panel Inserts, and Battery Backup	i.
and I/O Power Supply Units	39
Figure 34-1. St. Louis MPS Site # 34 Placement of Patch Panels, Patch	
Panel Inserts, and Battery Backup	
and I/O Power Supply Units	40
Figure 35-1. Wichita MPS Site # 35	
Placement of Patch Panels, Patch Panel Inserts, and Battery Backup	1
and I/O Power Supply Units	41
Figure 36-1. Denver MPS Site # 36	
Placement of Patch Panels, Patch Panel Inserts, and Battery Backup	•
and I/O Power Supply Units	42
Figure 37-1. Edwards AFB MPS Site # 37	
Placement of Patch Panels, Patch Panel Inserts, and Battery Backup	
and I/O Power Supply Units	43
Figure 38-1. Fairbanks MPS Site # 38	
Placement of Patch Panels, Patch	
Panel Inserts, and Battery Backup and I/O Power Supply Units	44
and 1/0 Towes Dappay Child	
APPENDIX 6 List of Acronyms (8 pages)	1
LIST OF FIGURES	
Figure 3-1. MPS to RMMS Subsystem Interfaces	26
Figure 3-2. MPS to RMMS Functional Interfaces	27
Figure 3-3. MPS to RMS Interface	29 30
Figure 3-4. MPS to MPS Interface Figure 3-5. MPS to MDT Interface at MPS Site	31
Figure 3-6. MPS to MDT Interface at Non-MPS Sit	
Figure 5-1. Project Responsibility Matrix (2	
Pages) Figure 7-1. MPS Enhancement Equipment Weights	39
Figure 7-1. MPS Enhancement Equipment Weights for Floor Loading Tolerances	50

	•	<u> 1</u>	Page No.
	Figure 7-2.	AC Connections Required to Support Installation of MPS Enhancements	52
LIST OF	TABLES		
	Table 7-1.	MPS Contractor Timeframes for Installation Activities at ARTCC's and FAA Support Sites	l 57
	Table 7-2.	Total System Operational Unavailability at ARTCC's and FAA Support Sites (Except for FAA	57
	Table 7-3.	Headquarters) MPS Contractor Timeframes for	57
	Table 7-4	Installation Activities at GNAS's Total System Operational	62
	Table 7-5.	Unavailability at GNAS's Total System Operational	62
		Unavailability at FAA Headquarters	64

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CHAPTER 1. GENERAL

- 1. <u>PURPOSE</u>. This order identifies the activities, responsibilities, schedules and available/required funding for implementing the enhancement of the existing Remote Maintenance Monitoring System (RMMS) maintenance processing subsystems (MPS).
- 2. <u>DISTRIBUTION</u>. This order is distributed to branch level in the Program Engineering, and Systems Maintenance Services in Washington headquarters; to branch level in the regional Airway Facilities division; to division level at the Mike Monroney Aeronautical Center and FAA Technical Center; and to selected Airway Facilities field offices.
- 3. <u>CANCELLATION</u>. Order 6140.3, System Program Plan and System Implementation Plan, En Route Maintenance Processor Subsystem, Remote Center Air-Ground/Remote Monitoring Subsystem, dated April 9, 1982 is canceled.
- 4-19. RESERVED.

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CHAPTER 2. PROJECT OVERVIEW

- 20. <u>SYNOPSIS</u>. Implementation of the FAA's Remote Maintenance Monitoring System (RMMS) is central to the agency's plans for modernizing maintenance operations. The maintenance processor subsystem (MPS) is the highest-level, primary RMMS processing resource, centralized at designated air route traffic control centers (ARTCC), general NAS (GNAS) sectors and national support sites throughout the United States. This project implementation plan (PIP) covers the nationwide implementation of enhancements to the presently-deployed MPS's.
- 21. <u>PURPOSE</u>. The purpose of this project (NAS Plan 6-01) is to enhance the installed base of MPS hardware and software by implementing MPS hardware and software enhancements. This is required to satisfy the processing demand imposed by recently-released MPS-resident maintenance management, and monitor and control functions, and to support growth of the initial RMMS into 1995. This is an interim measure to accommodate and exploit both new and planned system capabilities. End-state RMMS processing requirements will be accommodated through final MPS enhancements, upgrades or replacements to be implemented by the year 1995.
- 22. HISTORY. The RMMS is being developed and fielded to automate and centralize maintenance operations throughout the The objective is to provide a less manpower-intensive and more cost-efficient means of performing, managing and recording maintenance operations. The purpose of the RMMS is to monitor, control and certify the performance of NAS equipment and facilities from centralized, consolidated work centers, and to provide the record-keeping and information processing capabilities necessary to support efficient and cost-effective management of FAA maintenance operations (see FAA-E-2782, (RMMS Core System/Segment Specification) dated July 14, 1986 for a full description of RMMS and subsystem functions). The RMMS is to be emplaced in the NAS in three phases. The first phase was completed in 1985. It provided the basic RMMS network by deploying and implementing a total of thirty-eight MPS's over twenty-three ARTCC's, ten GNAS sectors, and five field support sites. The second phase is now in progress, and will provide

required interim RMMS capabilities until the year 1995. It provides enhancements to the basic RMMS network, including hardware and software upgrades to the MPS, implementation of maintenance data terminals (MDT), and implementation of retrofit or embedded remote monitoring subsystems (RMS). This phase also includes a selected release of MPS-resident applications software. Maintenance Management System (MMS) software was developed by APS-410 to support automated data logging and maintenance management functions. It is currently being distributed to all MPS sites by ASM-160. An interim monitor and control software (IMCS) release is being performed by ASM-160. It provides an interim capability to perform monitoring, control and certification functions at NAS facilities to which RMS's have been retrofit, or in which they are embedded. The third phase is slated to emplace the end-state RMMS by the year 1995.

23-29. RESERVED.

CHAPTER 3. PROJECT DESCRIPTION

30. <u>FUNCTIONAL DESCRIPTION</u>. The functional requirements associated with MPS enhancements are described in detail in FAA-E-2782, (RMMS Core System/Segment Specification), dated July 14, 1986, and NAS-SS-1000, NAS System Specification, Volume 5, dated December 1986. The functions of each MPS enhancement are described herein for the processors, disk storage, magnetic tape drives, processor cabinets, communications equipment, power supplies and printers that together comprise the enhancements to the MPS.

- a. <u>Processor Enhancements</u>. MPS processing capacity is being enhanced to allow applications to run more efficiently and increase throughput.
- b. <u>Disk Storage Enhancements</u>. MPS disk storage capacity is being expanded to meet MMS data storage and backup requirements.
- c. <u>Magnetic Tape Drive Enhancements</u>. Magnetic tape drives are being expanded to meet increased data storage requirements and provide increased throughput.
- d. <u>Cabinet Enhancements</u>. Existing processor cabinets are being modified, and additional cabinets are being installed to contain additional processing capacity.
- e. <u>Communications Subsystems Enhancements</u>. Communications capabilities are being enhanced to provide additional maintenance data terminal (MDT) and RMS inputs while increasing communications throughput.
- f. Additional Power Supplies. Power supplies will be added to support additional equipment requirements.
- g. <u>Printer Enhancements</u>. The number of printers is being expanded by the addition of high-speed printers at selected sites to handle additional current and projected system output requirements.
- h. <u>Fiber Optic Extension</u>. MPS-to-MPS communications at the FAA Technical Center (collocated sites) are being expanded through the use of fiber-optics communications to provide resource sharing.

Chap 3 Par 30

31. PHYSICAL DESCRIPTION. The physical characteristics of each MPS enhancement hardware component are described in this paragraph. The Tandem product identification and the item numbers, used in the installation schedule presented in appendix 1, are given for each component. All cables connecting MPS enhancement equipment to the existing MPS components will be provided by the MPS contractor unless otherwise identified in this PIP. Alternating current (ac) power supplies (cabling, outlets, receptacles) will be provided by the sites as described in chapter 7.

- a. <u>Processor Enhancements</u>. The processor enhancements described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of MPS processor enhancements to ARTCC's, GNAS's and FAA support sites is described in paragraph 34 herein. Integration of enhancements can be in upgraded, existing (modified) or new system cabinets, as applicable.
- (1) Tandem NonStop TXP Processor with 8-MB Memory (Item 6001). Each processor (product identification 1435) comprises the following boards, which will reside in existing system cabinets.
 - (a) Instruction processing (IP) board.
 - (b) Sequencer and control store (SQ).
 - (c) Channel and diagnostic data transceiver (CC).
 - (d) Memory control (MC).
 - (e) One 8-megabyte (MB) memory board.
- (2) Additional 2-MB Memory Module for Tandem NonStop II (Item 6002). The 2-MB memory module (product identification 2422) is a board consisting of 400-nanosecond semi-conductor memory with error detection and correction. It comprises a base assembly with 532 64-Kilobyte (KB) dynamic random-access-memory (RAM) devices installed. The module will reside in existing Tandem NonStop II processors.

(NonStop II to TXP) for Tandem Operations and Service Processor (Item 6003). An operation and service processor (OSP) enhancement (product identification 1G/1H) is required with NonStop TXP's. To achieve the upgrade, the existing OSP system maintenance processor (SMP) board in the OSP cabinet will be replaced with a new SMP board. The new SMP board will enhance the existing OSP (product identification 3910) to support diagnostics on the Tandem NonStop TXP, as well as on Tandem NonStop II processors. NonStop II processors shipped prior to 10/1/83 will receive OSP product identification 1G. NonStop II processors shipped on or after 10/1/83 will receive OSP product identification 1H.

- (4) <u>Cabling Supplied</u>. Two signal cables will connect each NonStop TXP 8-MB memory board to the NonStop TXP processor (see (1) and (1) (e) above).
- (5) <u>Physical Dimensions</u>. The physical dimensions for processor enhancements (boards) are expressed as integrated in system cabinets, the dimensions for which are presented in paragraph d.(3) herein.
- b. <u>Disk Storage Enhancements</u>. The disk storage enhancements described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of MPS disk storage enhancements to ARTCC's, GNAS's and FAA support sites is described in paragraph 34 herein.
- (1) Tandem XL8 Disk Drive (Item 6004). Each XL8 disk drive (product identification 4130) contains eight 415-MB (520 MB, unformatted) Winchester disk drives with permanently-mounted 8-inch disks in its own, stand-alone mounting cabinet, supplied with the disk drive. Each disk head assembly is contained in a sealed plug-in module with its own power supply. Average seek time is 15 milliseconds (ms); average latency time is 9.8 ms; the transfer rate is 1.86 MB/second.
- (2) <u>Tandem XL Disk Controller (Item 6006/6007)</u>. Each XL disk controller (product identification 3108-1 or 3108-2) is microprocessor-operated with a 4-KB buffer. It consists of two printed circuit boards (PCB), the channel interface PCB and the disk interface PCB, located in the existing or new system cabinet.

(3) Tandem XL4 Disk Drives (Item 6017). Each XL4 disk drive (product identification 4134) contains four 415-MB (520 MB, unformatted) Winchester disk drives with permanently-mounted 8-inch disks in its own, stand-alone mounting cabinet, provided with the disk drive. Each disk head assembly is contained in a sealed plug-in module with its own power supply. Average seek time is 15 ms; average latency time is 9.8 ms; the transfer rate is 1.86 MB/second.

- (4) Tandem Add-In Disk Pair (Item 6018). An add-in disk pair (product identification 4131) contains two 415-MB (520 MB, unformatted) Winchester disk drives with permanently-mounted 8-inch disks to be installed in XL4 disk drive cabinets to upgrade from an XL4 to an XL6, or in XL6 disk drive cabinets to upgrade from an XL6 to an XL8. Each disk head assembly is contained in a sealed plug-in module with its own power supply. Average seek time is 15 milliseconds (ms); average latency time is 9.8 ms; the transfer rate is 1.86 MB/second.
 - (5) Physical Dimensions.

Component	<u>Height</u> (inches)	<u>Width</u> (inches)	<u>Depth</u> (inches)	<u>Weight</u> (pounds)
Tandem XL8 Disk Drive	55.0	24.25	36.5	991.0
Tandem XL4 Disk Drive	55.0	24.25	36.5	680.0

- (6) <u>Cabling Supplied</u>. The following cabling will be supplied by the MPS contractor to achieve installation of the MPS disk storage enhancements.
- (a) The following will be used to connect the 3108-1 and 3108-2 XL disk controller to the Tandem 7806 and 7807 patch panels.
 - 1. Tandem 31C-16 control cable.
 - 2. Tandem 42C-50 control cable.
 - 3. Tandem 31D-16 data cable.

- 4. Tandem 42D-50 data cable.
- 5. Tandem 42T-2 disk terminator.
- (b) A Tandem 42D-50 data cable will be provided by the MPS contractor for the add-in disk pair to connect the disk controller to the patch panel.
- c. <u>Magnetic Tape Drive Enhancements</u>. The magnetic tape drive enhancements described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of MPS magnetic tape drive enhancements to ARTCC's and FAA support sites is described in paragraph 34 herein.
- (1) Tandem Tape Drive, 125 IPS (Item 6008). Each tape drive (product identification 5104-B) is a single-capstan vacuum chamber, 9-track tape drive which operates at 125 inches per second (IPS). A switch selects either 800 bits per inch (BPI) non-return to zero inverted (NRZI) format, or 1600 BPI phase encoding (PE) format. Rewind speed is 300+ IPS. The tape drive uses 10.5 inch tape reels. It includes a mounting cabinet.
- (2) Tandem Magnetic Tape Controller (Item 6009). One magnetic tape controller board (product identification 3207) will be supplied for each 125 IPS tape drive to support enhanced Tandem tape drive operations (see item 6008 above). The controller board will reside in the input/output (I/O) chassis of the system cabinet.
- (3) Tandem High-Performance 200 IPS Tape Subsystem (Item 6019). Each high performance tape subsystem (product identification 5130-1) is a single-capstan vacuum chamber that operates at 200 IPS. The drive can read and write American National Standard Institute (ANSI)-compatible tapes at 1600/6250 BPI. Rewind speed is 300+ IPS. The drive accepts either tape cartridges or reels for automatic loading. It will include a mounting cabinet and a Tandem 3208 external tape controller which will reside in the I/O chassis of the system cabinet.

(4) Physical Dimensions.

Component	<u>Height</u> (inches)	<u>Width</u> (inches)	<u>Depth</u> (inches)	<u>Weight</u> (pounds)
125 IPS Tape Drive	72.0	30.0	32.2	360.0
200 IPS Tape Drive	55.0	39.4	29.7	860.0

- (5) <u>Cabling Supplied</u>. The following cabling will be supplied by the MPS contractor to achieve installation of the MPS tape drive enhancements.
- (a) One of each of the following will be used to connect the 5104 125-IPS tape drive to the 3207 tape controller.
 - 1. Tandem 58482 control cable.
 - 2. Tandem 513316 data cable.
- (b) One of each of the following will be used to connect the 5130 200 IPS tape drive to the 3208 tape controller.
 - 1. Tandem 323-16 control cable.
 - 2. Tandem 513-50 data cable.
- d. Additional Cabinets. Tandem NonStop TXP cabinets and expansion cabinets will be provided to support the implementation of NonStop TXP processors, as described below. Additional and expansion cabinets distribution to ARTCC's and FAA support sites is described in paragraph 34 herein.
- (1) <u>Tandem System Cabinet (Item 6010)</u>. The system cabinet (product identification 7123) is a standard-size, single-bay cabinet that accommodates twenty-four I/O controllers, and four system processing units, each having up to four memory slots. It includes Dynabus logic and I/O power circuitry.
- (2) <u>Tandem System Expansion Cabinet (Item 6028)</u>. The system expansion cabinet (product identification 7107) is required by systems that contain three or more processor

cabinets. It is a single-bay cabinet having the same appearance as system cabinets. It provides four front-mounting spaces and bus extensions for any mix of patch panels. It contains an AC distribution box and power rails for accommodating up to four I/O power supplies and four battery packs.

(3) Physical Dimensions.

Component	<u>Height</u> (inches)	<u>Width</u> (inches)	<u>Depth</u> (inches)	<u>Weight</u> (pounds)
System Cabinet	71.0	32.0	32.2	230.0
Expansion Cabinet	71.0	32.0	32.2	169.0

- e. <u>Communications Equipment Enhancements</u>. The communications equipment enhancements described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of communications equipment enhancements to ARTCC's and FAA support sites is described in paragraph 34 herein.
- (1) Tandem Communications Controller Board (Item 6011). The communications controller (product identification 6105-1) consists of four communications line interface processors (CLIP), each of which contain a microprocessor and 64 KB of memory to support one communications line. The communications controller provides link-level support to the processor. The controller will support ATP 6100 point-to-point asynchronous protocol, and the 6100 advanced data communication and control procedure (ADCCP) synchronous protocol. It includes a 6165-1 patch panel insert (item 6012), capable of supporting up to three controllers.
- (2) Tandem Asynchronous Communications Controller Extension Board (Item 6013). The asynchronous extension board (product identification 6304-2) will increase the capability of the existing Tandem 6303 asynchronous communications controller, by adding support for up to fifteen half-duplex lines. One Tandem 7501 asynchronous patch panel (item 6014) will be supplied with each extension board.
- (3) <u>Tandem Asynchronous Communications Controller</u>
 <u>Board (Item 6015)</u>. Each asynchronous communications controller (product identification 6106) is a dual-ported,

micro-programmable I/O controller. It connects up to sixteen asynchronous data communication lines to the I/O channels of the Tandem NonStop II and Tandem NonStop TXP. A Tandem SBS-16 patch panel insert will be provided with each controller.

Tandem Communications Subsystem (Item 6029). communications subsystem (product identification 6101E) will accommodate up to fifteen line interface units (LIU). include two Tandem communications subsystem add-on boards (product identification 6102, item 6029A) which will expand the subsystem to accommodate up to forty-five LIU's. Thirty-seven Tandem LIU Boards (product identification 6120-1, item 6029B) will be provided with the subsystem. They are capable of supporting RS-232-C and V.24/V.28 electrical interfaces, as well as full duplex asynchronous (50 bps to 19.2K bps), byte-synchronous (up to 19.6K bps), and bit-synchronous (up to 56K bps) communications. Eight Tandem LIU-4 boards (product identification 6140-1, item 6029C) will be provided with the subsystem. They are capable of supporting up to four asynchronous lines (50 bps to 19.2K bps) with RS-232-C and V.24/V.28 electrical interfaces.

(5) Physical Dimensions.

Component	<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Weight</u>
	(inches)	(inches)	(inches)	(pounds)
Communications Subsystem	73.0	33.03	36.0	736.0

- (6) <u>Cabling Supplied</u>. The following cabling will be supplied by the MPS contractor to achieve installation of the MPS communications subsystem enhancements.
- (a) To connect each 6105 communications controller to the patch panel: one Tandem 60-16 signal cable.
- (b) To connect each asynchronous communications controller extension board to the patch panel: four Tandem 63B-16 signal cables.
- (c) To connect each asynchronous communications controller board to the external RS-232-C and 20 milliampere (ma) current loop communications lines: one Tandem 60-16 signal cable.

f. Additional Power Supplies. The additional power supplies described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of additional power supplies to ARTCC's and FAA support sites is described in paragraph 34 herein.

- (1) Tandem Input/Output (I/O) Only Power Module (Item 6016). Each power module (product identification 7301) will provide additional direct current (DC) power for I/O controllers in systems where extensive I/O capability requires more power than can be provided by the processing unit power modules.
- g. <u>Printer Enhancements</u>. The printer enhancements described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of enhanced printers is to FAA support sites, as described in paragraph 34 herein.
- (1) Tandem High-Performance Dot-Matrix Line Printer (Item 6020). The dot-matrix printer (product identification 5518) is a heavy-duty printer designed for high-volume applications. It prints 1200 lines per minute in normal mode, and 1600 lines per minute in a low-resolution mode. It will include the Tandem 55M004 Roman-8 font, Tandem 55M011 high-speed draft quality 7-bit USASCII font, and the Tandem 55M102 Roman-89 character font. The printer will include a remote line printer system, consisting of a transmitter (product identification 55 FX) and a receiver (product identification 55 FR), which allows data conversion from parallel to serial and back, for transmission through dedicated communications links.
- (2) Tandem High-Speed Serial Matrix Printer (Item 6027). The serial matrix printer (product identification 5520) is a table-top unit supporting either front or bottom forms loading. It will be supplied with, and mounted on, a Tandem pedestal/paper receptacle (product identification 7203, item 6027A). Printing speed is 340 characters per second, at a nominal 125 lines per minute using all 132 columns.

(3) Physical Dimensions.

Component	<u>Height</u>	Width	<u>Depth</u>	Weight
Dot Matrix Printer	43.3	38.7	25.0	465.0
Serial Matrix Printer	8.4	26.5	23.4	67.0
Printer Pedestal (for Serial Ma Printers)	26.0 Atrix	32.0	24.0	12.0

- (4) <u>Cabling Supplied</u>. The following cabling will be supplied by the MPS contractor to achieve installation of the MPS printer enhancements.
 - (a) To connect the 5518 dot-matrix printer.
 - 1. One power cable (printer to power).
- 2. One Tandem signal cable (76-A) (printer to controller).
 - (b) To connect the 5520 serial matrix printer.
- $\underline{1}$. One power cable (6D-25) (printer to power).
- $\underline{2}$. One signal cable (printer to communications port).
- h. <u>Fiber Optic Extension</u>. The fiber optic enhancements described below will be provided and installed by the MPS contractor as described in chapter 7 of this PIP. Distribution of fiber optic enhancements is to the FAA Technical Center as described in paragraph 34 herein.
- (1) Tandem Fiber-Optic Extension (FOX) (Item 18). The fiber-optic extension (FOX) (product identification 6700) is a system-to-system link between two MPS's. It contains two sets of boards for each fiber optic link installation.

- (2) <u>Tandem Fiber-Optic Cable Terminator Kit (Item 18A)</u>. The kit (product identification 7619) will contain fiber-optic cable connectors (ten SMA-906 connectors per kit) to terminate the 100-micron optical cable.
 - (3) <u>Cabling Supplied</u>. Not applicable.
- 32. <u>SYSTEM REQUIREMENTS</u>. The system requirements for the MPS enhancement are described below in terms of operating environment, and power requirements. The environmental requirements for storing equipment are the same as the computer room within which the equipment will be operated.

a. Environmental Requirements

- (1) <u>Humidity</u>. Acceptable limits of humidity for Tandem components are specified in paragraph 32.a.(2); optimum is 50% (+/- 3%) non-condensing.
- (2) <u>Temperature</u>. Acceptable temperature limits for Tandem NonStop II or NonStop TXP components are 60 degrees Fahrenheit (F) to 85 degrees F; optimum is 72 degrees F (+/-3 degrees F). Allowable rates of temperature change can be no more than +/- 5 F per hour. Specific requirements for the major system units are identified below by item number.

<u>Items</u>	<u>Description</u>	Acceptable Ranges Temperature (F) Humidity ((%)
6005,6017	XL8 and XL4 Disk Drive	50 - 86 20 - 80	
6008	125 IPS Tape Subsystem	41 - 104 20 - 80	
6019	200 IPS Tape Subsystem	32 - 122 15 - 95	
6010,6028	System/Expansion Cabinet	60 - 90 30 - 80	
6029	6100 Communications Subsystem	60 - 90 30 - 80	
6020	Dot Matrix Printer	50 - 122 5 - 95	

Chap 3 Par 31

<u>Items</u>	<u>Description</u>	<u>Acceptable</u> <u>Temperature (F)</u>	
6027	Serial Matrix Printer	50 - 100	20 - 80
6026	FOX Controller	60 - 90	30 - 80

Power Requirements. Tandem computer components require a continuous, stable ac input power source free from electrical One ac power cable will be installed by the site for each cabinet containing a power distribution unit (see paragraph 71 for site preparation requirements). Power will be provided via a 5-wire, 3-phase, 208-volt, 60-Hz source. Voltage between phase lines is a nominal 208 volts; voltage between a phase line and neutral is a nominal 120 volts. The main circuit breakers in each system cabinet are rated at 40 amperes (amps). corresponding breakers installed in the computer room power panel must be rated at 40 amps. Circuit breakers protecting service equipment outlets must be rated at 15 amps. In most cases, peripheral equipment circuit breakers are also rated at 15 amps. The following electrical specifications apply to NonStop II and NonStop TXP installations.

- (1) Maximum allowable sags (any or all phases).
 - (a) 80% Nominal 10 cycles.
 - (b) 50% Nominal 2.5 cycles.
- (2) Maximum allowable surges (any or all phases).
 - (a) 130% Nominal 0.5 cycle.
 - (b) 120% Nominal 1 cycle.
- (c) 115% Nominal 30 cycles at 60 Hz; 25 cycles at 50 Hz.
- (3) Maximum allowable interruptions (any or all phases): 0% Nominal 0.5 cycle.
- (4) Maximum allowable steady-state power: +5% to -10% of rated voltages for the devices.

(5) Maximum allowable transients (nominal voltage = root mean square value).

- (a) 100 micro-second pulse at 180% of nominal voltage.
- (b) 1 milli-second pulse at 100% of nominal voltage.
- (c) 8.33 milli-second pulse at 30 % of nominal voltage.
 - (d) 0.1 second pulse at 5% of nominal voltage.

(6) AC Outlet Requirements.

- (a) Tandem XL8 Disk Drive (Item 6005) and Tandem XL4 Disk Drive (Item 6017). Each disk drive requires two standard 3-prong, twist-lock power receptacles, NEMA IG-L6-15R (15 amps, 250 volts). The two power cords from the cabinet must be plugged into separately-branched 15 amp circuits of 220 volts (+20%,-20%), 43 to 63 Hertz (Hz) each.
- (b) <u>Tandem High-Performance 200 IPS Tape</u>
 <u>Subsystem (Item 6019)</u>. Each 200 IPS tape subsystem requires one standard center-ground power receptacle, NEMA IG-L6-20R (20 amps, 250 volts). The receptacle must be within three feet of the tape drive cabinet location.
- (c) Tandem 125 IPS Tape Drive (Item 6008). Each 125 IPS tape subsystem requires a 208-volt (-10/+5%), 50 or 60 Hz (+/-1), 3-phase power source.
- (d) <u>Tandem System Cabinet (Item 6010) and Expansion Cabinet (Item 6028)</u>. System cabinets and expansion cabinets require a 208-volt (-10/+5%), 50 or 60 Hz (+/-1), 3-phase power source.
- (e) <u>Tandem High-Performance Dot-Matrix Line</u>
 <u>Printer (Item 6020) and Serial Matrix Printer (Item 6027)</u>. Each dot matrix line printer requires one standard center-ground power receptacle, NEMA IG-5-15R (15 amps, 125 volts) for use with a standard three-prong plug. The receptacle must be within ten feet of the printer location.

(f) Tandem Remote Printer Interface System Local Unit (Item 6024) and Remote Unit (Item 6025). Each remote printer interface unit requires one standard center-ground power receptacle, NEMA IG-5-15R (15 amps, 125 volts) for use with a standard three-prong plug. The receptacle must be within ten feet of the printer location.

- (g) Tandem 6100 Communications Subsystem (Item 6029). Each communications subsystem requires one standard center-ground power receptacle, NEMA IG-L21-20R (20 amps, 208 volts) for use with a standard four-prong plug. The receptacle must be within three feet of the communications subsystem cabinet location.
- c. <u>Equipment Separation Requirements</u>. The separation requirements for Tandem MPS enhancement equipment are specified below (measurements are in inches).

<u>Items</u>	<u>Description</u>	Front	<u>Back</u>	Top	<u>Left</u>	Right
6005, 6017	XL8 and XL4 Disk Drive	48	48	48	0	0
6008	125 IPS Tape Drive	30	30 ,	0	0	O
6019	200 IPS Tape Drive	30	30	0	0	0
6010	System Cabinet	30	30	0	o	0
6028	System Expansion Cabinet	22	30	0	0.	0
6029	6100 Communications Subsystem	30	30	0	30	0
6020	Dot Matrix Printer	18	20	6	11	4
6027	Serial Matrix Printer	18	20	6	11	4

- 33. <u>INTERFACES</u>. The functional interfaces of the MPS are described in paragraph 35 herein.
- a. <u>Implementation</u>. The interfaces which influence implementation of MPS enhancements are described below.
- (1) Tandem NonStop TXP Processor with 8-MB Memory (Item 6001). Each NonStop TXP processor will interface with existing Tandem MPS hardware, peripherals and communications controllers, and be capable of running NonStop II application programs at the non-privileged level without change.
- (2) Additional 2-MB Memory Module for Tandem NonStop II (Item 6002). The 2-MB memory module will interface with the current Tandem NonStop II processor.
- (3) Tandem XL Disk Controller (Item 6006/6007). The channel interface PCB will interface with the Tandem NonStop II and the Tandem NonStop TXP (at ARTCC and support sites only), and with the Tandem NonStop II at GNAS sites. The disk interface PCB will interface with the Tandem XL8 disk drive (ARTCC and support sites) and the Tandem XL4 disk drive (GNAS sites).
- (4) <u>Tandem Add-In Disk Pair (Item 6018)</u>. The add-in disk drive pairs will interface with the Tandem 3108 disk controller.
- (5) Tandem Communications Controller Board (Item 6011). A 6165-1 patch panel insert (Item 10) will be used to provide the electrical interface between the communications controllers and the communications lines.
- (6) Tandem High-Performance Dot-matrix Line Printer System 6020). The printer will include a remote line printer system, consisting of a transmitter (product identification 55 FX) and a receiver (product identification 55 FR), which allows data conversion from parallel to serial and back, for transmission through dedicated communications links.
- (7) Tandem Fiber-Optic Extension (FOX) (Item 6026). The FOX link will interface with the Tandem NonStop II processor and Tandem NonStop TXP processor to provide MPS-to-MPS connectivity at the FAA Technical Center (ACT-110's system to ASM-160's system).

b. <u>Documentation</u>. Applicable interface documentation exists in the following Interface Requirements Documents (IRD) and Interface Control Documents (ICD).

- (1) Logistic Control Number (LCN)/User System Interface Requirements Document (IRD) NAS-IR-21020000 (Baselined)
- (2) MPS/Automation Subsystem IRD NAS-IR-51030002 (Baselined)
- (3) MPS/Area Control Computer Complex (ACCC) IRD NAS-IR-21015103 (Baselined)
- (4) MPS/National Communications Center (NCC) (NADIN II) IRD NAS-IR-51034302 (Baselined)
- (5) Voice Switching and Control System (VSCS)/MPS IRD NAS-IR-51034201 (In Review)
- (6) MPS/Flight Service Data Processing System (FSDPS) IRD NAS-IR-51032301 (Planned 8/88)
- (7) MPS/National Airspace Data Interchange Network (NADIN) MSN (1A) NAS-IR-51034301 (Planned)
- (8) Network Management and Control Equipment (NMCE)/MPS IRD NAS-IR-41015103 (TBD)
 - (9) MPS/MWP IRD (Planned 9/88)
 - (10) MPS/MMC IRD (TBD)
 - (11) MPS/TCS IRD (TBD)
 - (12) MPS/TMVS IRD (TBD)
- 34. MPS Enhancements Distribution. The distribution of MPS enhancement equipment for installation at ARTCC's, GNAS's and FAA support sites is presented below in a pre- and post-enhancement context.
- a. Air Route Traffic Control Centers (ARTCC). MPS functions are currently implemented at each ARTCC using three Tandem NonStop II processors, and associated disk drives and peripherals which run MPS-resident IMCS and MMS software.

Enhancements to the MPS will upgrade the memory in two of the three Tandem NonStop II processors, add two Tandem NonStop TXP processors, increase disk storage capacity, add one tape drive, and provide an additional system cabinet, communications subsystem and power supplies. MPS enhancements distribution to ARTCC's is described below.

- Processor Enhancements. Each ARTCC will receive (1)two 8-MB Tandem NonStop TXP processors, and two additional 2-MB memory boards (with the exception of Anchorage, San Juan and Honolulu ARTCC's which will each receive five additional 2-MB memory boards). Except for the Anchorage, San Juan and Honolulu ARTCC's, using these 2-MB memory boards, the MPS contractor will upgrade two of the three Tandem NonStop II processors from 3.5 MB to 5 MB of memory each. At Anchorage, San Juan and Honolulu, the MPS contractor will use four of the 2-MB memory boards to upgrade two of the three Tandem NonStop II processors from 1.5 MB to 5 MB of memory each. Using the remaining 2-MB memory board at the Anchorage, San Juan and Honolulu ARTCC's, the MPS contractor will upgrade the third Tandem NonStop II processor from 1.5 MB to 3.5 MB of memory. The remaining Tandem NonStop II processor (with 3.5 MB of memory) and 0.5-MB memory boards will be removed by the MPS contractor from each ARTCC (except for Kansas City (ZKC)), and transferred to a GNAS, FAA support site or the FAA Depot in accordance with appendix 2 herein.
- (2) Disk Storage Enhancements. Except for the Memphis and Kansas City ARTCC's, each ARTCC site will receive an XL8 disk drive, four 3108-1 disk controllers, one Tandem 7806 patch panel insert, and two Tandem 7807 patch panel inserts. One add-on disk pair will be installed at the Memphis ARTCC to upgrade its XL6 to an XL8. Two add-on disk pairs will be installed at the Kansas City ARTCC to upgrade its XL4 to an XL8. All non-XL series disk drives, disk patch panels and disk controllers, will be removed by the MPS contractor, and shipped to the FAA Depot by the site.
- (3) <u>Magnetic Tape Drive Enhancements</u>. ARTCC's will each receive one Tandem 125 IPS tape drive and one tape controller.
- (4) Additional Cabinets An additional system cabinet will be supplied to each ARTCC to accommodate the additional hardware. The MPS contractor will modify the backplane of the existing system cabinets to permit their use with Tandem NonStop TXP processors.

Chap 3 Par 34

(5) <u>Communication Equipment Enhancements</u>. A new Tandem 6100 communications subsystem will be installed at each ARTCC. The capability of the existing Tandem 6303 asynchronous communications controllers will be expanded by adding a 6304 extension board.

- (6) <u>Additional Power Supplies</u>. Four additional I/O power supply units will be installed by the MPS contractor at each ARTCC.
- b. General NAS (GNAS) Sites. MPS functions are currently implemented at GNAS's using two Tandem NonStop II processors, and associated disk drives and peripherals running MMS software. Enhancements to the MPS will upgrade all lead GNAS sector sites by increasing disk storage capacity, adding two Tandem NonStop II processors, and increasing the memory of each existing Tandem NonStop II processor. MPS enhancements distribution is described below.
- Processor Enhancements. Each GNAS will receive (1)two 3.5-MB memory Tandem NonStop II processors and two 0.5-MB memory boards transferred by the MPS contractor from ARTCC's. In addition, each GNAS will receive four new 2.0-MB memory boards (St. Louis (ZTL) will receive six new 2.0-MB memory boards). The MPS contractor will upgrade each of the four Tandem NonStop II processors to 5 MB's of memory by: removing one 0.5-MB memory board from each of the transferred 3.5-MB memory Tandem NonStop II processors; 2) adding the removed 0.5-MB memory boards and the transferred 0.5-MB boards to the existing 2.0-MB memory Tandem NonStop II processors; and 3) adding one new 2.0-MB memory board to each Tandem NonStop II proceessor. The MPS contractor will achieve St. Louis (ZTL) upgrades by: 1) removing two 0.5-MB memory beards from, and installing two 2.0-MB memory boards in each existing 2.0-MB Tandem NonStop II processor; 2) removing one 0.5-MB memory board from, and installing one 2.0-ME memory board into, the transferred 3.5-MB memory NonStop II processors; and 3) shipping all unused 0.5-MB memory boards to the FAA Depot.
- (2) <u>Disk Storage Enhancements</u>. Each GNAS will receive an XL4 disk drive. Two 3108-2 disk controllers will be supplied with Tandem 7806 and 7807 patch panel inserts. All non-XL series disk drives, disk patch panels and disk controllers will be removed by the MPS contractor, and shipped to the FAA Depot by the site.

c. <u>FAA Support Sites</u>. The MPS's located at the five FAA national support sites will be enhanced to enable them to support development, testing, and evaluation of the enhanced MPS systems being implemented under this PIP.

- (1) <u>Processor Enhancements</u>. The national support sites will be upgraded as follows.
- (a) <u>FAA Headquarters</u>. ASM-220's system will be upgraded to include four Tandem NonStop TXP processors with 8 MB of memory each.
- (b) <u>FAA Technical Center</u>. ACT-110's post-enhancement system will include five Tandem NonStop TXP processors with 8 MB of memory each, and four Tandem NonStop II processors with 5 MB of memory each. ASM-160's post-enhancement system will include two Tandem NonStop TXP processors with 8 MB of memory each and four Tandem NonStop II processors with 5 MB of memory each. The remaining Tandem NonStop II, 0.5-MB memory boards will be removed by the MPS contractor and shipped the the FAA Depot in accordance with appendix 2.
- (c) <u>FAA Academy</u>. AAC-940's post-enhancement system will include three Tandem NonStop II processors with 5 MB of memory each, and two Tandem NonStop TXP processors with 8 MB of memory each. Subsequent to the MPS enhancement, a fourth NonStop II processor with 5MB of memory will be added to AAC-940's system. The remaining Tandem NonStop II 0.5-MB memory boards will be removed by the MPS contractor, and shipped to the FAA Depot in accordance with appendix 2 herein. The extra 2.0-MB memory board will be shipped to the FAA Depot in accordance with appendix 2.
- (d) <u>Mike Monroney Aeronautical Center</u>. ASM-150's post-enhancement system will include two Tandem NonStop TXP processors with 8 MB of memory each, and two Tandem NonStop II processors with 5 MB of memory each.
- (2) <u>Disk Storage Enhancements</u>. The FAA Technical Center (ACT-110's system and ASM-160's system) and FAA Headquarters (ASM-220's system) will each receive two XL8 disk drives. The other two support sites (FAA Academy (AAC-940's system) and the Mike Monroney Aeronautical Center (ASM-150's system)) will each receive one XL8 disk drive. The 3108-1 disk controller will be supplied with the Tandem 7806 and 7807 patch panel inserts. All existing non-XL disk drives, disk patch

panels, and disk controllers (excluding the Mike Monroney Aeronautical Center (AAC-940 system) and the FAA Technical Center (ASM-160's system only)), will be removed by the MPS contractor, and shipped to the FAA Depot by the site.

- (3) <u>Magnetic Tape Drive Enhancements</u>. Except for FAA headquarters (ASM-220's system) and the Mike Monroney Aeronautical Center (ASM-150's system), FAA support sites will receive one 125-IPS tape drive. In addition, FAA headquarters (ASM-220's system) and the FAA Technical Center (ACT-110's system) will each receive one 200-IPS high-performance tape subsystem.
- (4) Additional Cabinets. An additional system cabinet will be supplied to each support site to accommodate additional hardware. In addition, FAA headquarters (ASM-220's system) and the FAA Technical Center (ACT-110's system) will receive an expansion cabinet to accommodate additional power supply units and patch panels, and allow the system to add additional processors. The MPS contractor will modify the backplane of existing system cabinets to permit their use with NonStop TXP processors.
- (5) Communication Equipment Enhancements. New Tandem 6100 communications subsystems will be added to all support sites except FAA headquarters (ASM-220's system) and the Mike Monroney Aeronautical Center (ASM-150's system). The capability of existing Tandem 6303 asynchronous communications controllers will be expanded at all support sites by adding a 6304 extension board.
- (6) <u>Additional Power Supplies</u>. Four additional I/O power supply units will be supplied at all support sites except the Mike Monroney Aeronautical Center (ASM-150's system), which will receive two additional I/O power supply units.
- (7) <u>Printer Enhancements</u>. A dot-matrix printer will be added to the FAA Technical Center (ACT-110's system), and high-speed serial printers will be added to the FAA Technical Center (ACT-110's system) and FAA headquarters (ASM-220's system).
- (8) <u>Fiber Optic Extension</u>. A fiber-optic extension link will be provided at the FAA Technical Center (ACT-110's system) to allow the ACT-110 MPS to be connected to the ASM-160 MPS via a high-speed data link.

- REMOTE MAINTENANCE MONITORING SYSTEM FUNCTIONS. The RMMS is a distributed network of computers, processors, and communications subsystems. Its purpose is to collect, process, store and disseminate monitored NAS subsystem status, performance and alarm/alert data; to provide maintenance control and uplink adjustment, and initiate diagnostic and certification tests for remotely-located FAA facilities and equipment from centralized locations; and to provide maintenance management data to users. The RMMS is composed of maintenance processor subsystems (MPS), remote monitoring subsystems (RMS), and fixed, portable and transportable maintenance data terminals (MDT). MPS-resident software packages perform the monitoring and control, and database management functions central to the RMMS. Maintenance Management System (MMS) software provides the administrative and technical support software required to automate the on-line recording, storage, analysis and distribution of data. Monitor and control software (MCS) performs status and alarm collection and reporting, remote control, diagnostics and on-line data recording. An interim MCS (IMCS) capability has been implemented, and an initial MMS software version is currently being deployed on existing MPS's.
- a. <u>Functional Interfaces</u>. The MPS supports the functional interfaces described below, as illustrated in figure 3-1 and figure 3-2.
- (1) Remote Monitoring Subsystem. The MPS supports interfaces with RMS's retrofitted to or embedded in NAS facilities and equipment. The interface enables MPS polling of the RMS to determine NAS facility/equipment performance, achieve status monitoring and control, receive alarms/alerts, perform diagnostic and certification tests, and obtain maintenance management data.
- (2) Other Maintenance Processor Subsystems. Each MPS can interface to any other MPS in the NAS through dedicated communications links to exchange status, control and MMS data.
- (3) <u>Maintenance Data Terminals (MDT)</u>. MPS's support interfaces with fixed, transportable and portable maintenance data terminals (MDT) to enable users to issue control commands, remote adjustment commands, and diagnostic and certification test commands through the MPS-resident IMCS and MMS software. The interface also allows users to enter and request management data using MMS.

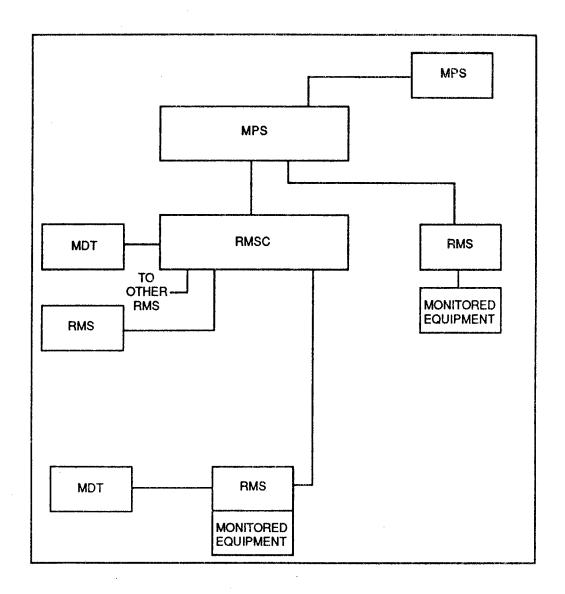


FIGURE 3-1. MPS TO RMMS SUBSYSTEM INTERFACES

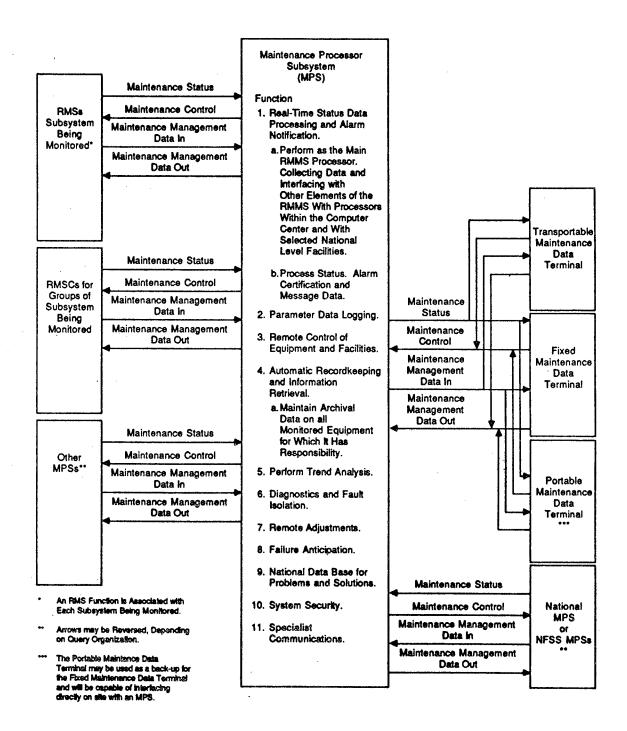


FIGURE 3-2. MPS TO RMMS FUNCTIONAL INTERFACES

(4) <u>Maintenance Control Center (MCC)</u>. The MPS interfaces with the maintenance control center processor (MCCP), located at the maintenance control center (MCC) to permit display of status and control data at the maintenance monitor console (MMC).

b. Physical Interfaces.

- (1) Remote Monitoring Subsystem. Requirements for the MPS-to-RMS interfaces are defined in NAS-MD-790, Remote Maintenance Monitoring Subsystem Interface Control Document, dated April 11, 1986 for data interchange, timing and control signals. This applies for synchronous and asynchronous transmissions, electrical signal characteristics, and mechanical connections. The interface connectors on both the RMS and the MPS are RS-232-C and are configured using a dedicated communications link as shown in figure 3-3.
- (2) Other Maintenance Processor Subsystems. The MPS to MPS interface is implemented through dedicated communications link and modems. The interface connectors on each MPS are RS-232-C and are configured, as shown in figure 3-4.

(3) Maintenance Data Terminals.

- (a) <u>Fixed MDT's</u>. Fixed MDT's located at MPS sites interface with the MPS through a 20-ma current loop cable, as shown in figure 3-5. At non-MPS sites, the fixed MDT interface with the MPS is achieved through telephone lines or through the Data Multiplexing Network (DMN) as shown in figure 3-6.
- (b) <u>Transportable MDT's</u>. The transportable MDT interface with the MPS will be identical to those of the fixed MDT.
- (c) <u>Portable MDT's</u>. The portable MDT interface with the MPS will be identical to those of the fixed MDT.
- 36-39. RESERVED.

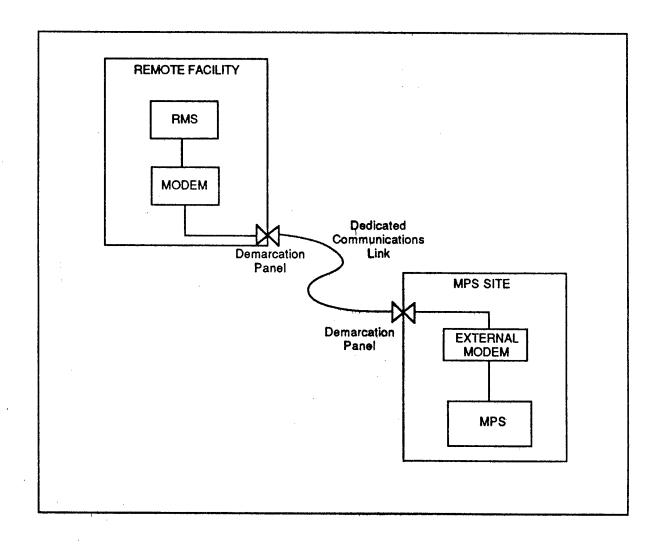


FIGURE 3-3. MPS TO RMS INTERFACE

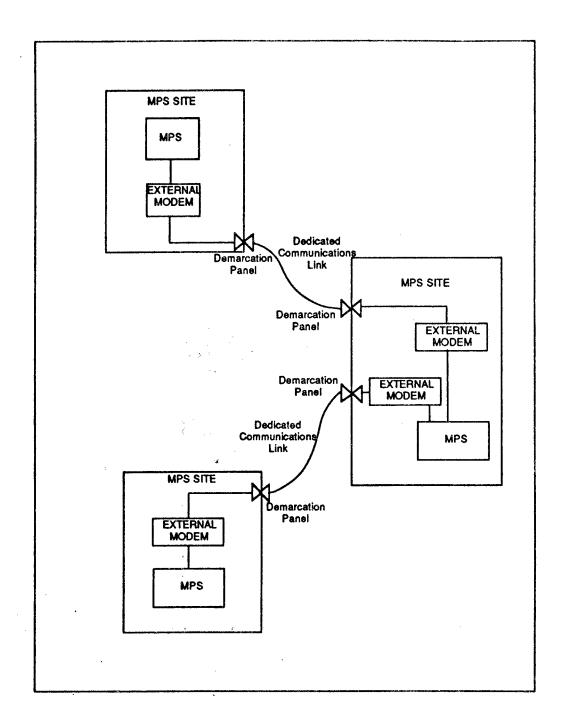


FIGURE 3-4. MPS TO MPS INTERFACE

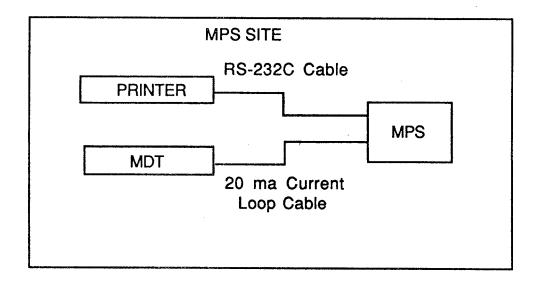


FIGURE 3-5. MPS TO MDT INTERFACE AT MPS SITE

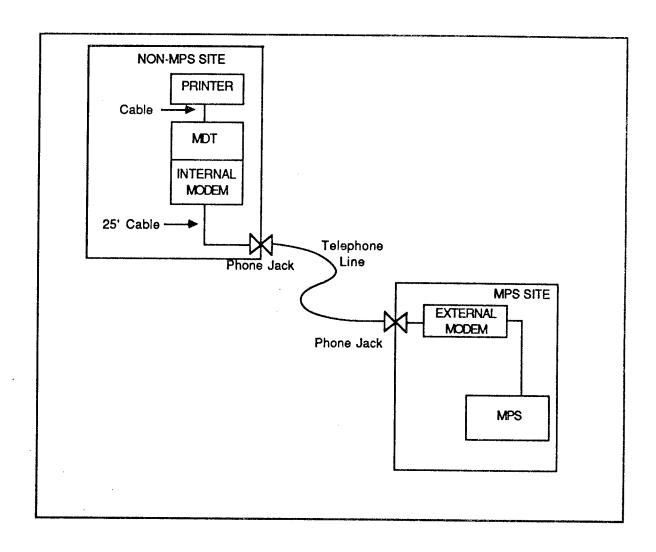


FIGURE 3-6. MPS TO MDT INTERFACE AT NON-MPS SITE

CHAPTER 4. PROJECT SCHEDULES AND STATUS

- 40. PROJECT SCHEDULES AND GENERAL STATUS. Summary milestone schedules encompassing program and project milestone activities are developed and maintained by the System Engineering and Integration Contractor (SEIC), and controlled by the Director, Program Engineering Service, APS-1, and/or the Deputy Associate Administrator for Airway Facilities, AAF-2. Project milestones are reflected in terms of scheduled completion date, current status date and actual completion date. Project summary milestone schedules are reviewed monthly by the NAS Program Status Review Board (PSRB). The summary schedule associated with the MPS enhancement project forms the basis for deriving the milestone schedule summary presented in paragraph 41 herein.
- 41. MILESTONE SCHEDULE SUMMARY. The schedule summarizing MPS enhancement implementation milestones is expressed for contract award to a bidder proposing brand-name equipment (Tandem equipment). If necessary, the schedule will be changed to reflect the latest MPS Enhancement implementation milestones based on the actual contract award date. Changes to the schedule will be implemented through the formal change process prescribed by the NAS Project Statusing and Baseline Schedule Change Control Procedures. The completion dates for milestone activities are reflected below.

Activity	<u>Date</u>	
Contract Award	8/88	(Completed)
Logistics Guidance Conference	9/88	(Completed)
FAA Integration Testing (by ACT-110)	10/88	(Completed)
Deployment Readiness Review (Formal Briefing)	11/88	
Operational Test and Evaluation (OT&E) Shakedown Testing (by ASM-160)	11/88	
Provisioning Conference	11/88	
Installation of 1st Operational ARTCC (ZHU)	12/88	

Activity	<u>Date</u>
1st ARTCC (ZHU) Key Site Testing	12/88
1st ARTCC (ZHU) Joint Acceptance Inspection (JAI)	12/88
Installation of 1st Operational GNAS (DFW)	1/89
1st Operational GNAS Key Site Testing	1/89
1st Operational GNAS (DFW) JAI	1/89
Electronic Equipment Modification (EEM) and Site Program Bulletin (SPB) Issued to Regions	2/89
Delivery to Last Operational Site	5/89
Last JAI Completed	6/89

42. INTERDEPENDENCIES AND SEQUENCE. Implementation of MPS enhancement equipment is not critically dependent on the implementation of other maintenance automation projects. Enhancements to the MPS will provide the field with the necessary processing power to run recently-released MMS software and IMCS functions, and to support system workload growth to 1995. A parallel procurement is underway to field fixed and transportable maintenance data terminals (MDT) to provide user access to MPS-resident IMCS and MMS software.

43-49. RESERVED.

CHAPTER 5. PROJECT MANAGEMENT

- 50. PROJECT MANAGEMENT, GENERAL. Overall project management responsibility for implementation of maintenance automation projects rests with the Navigation/Landing and Facility Monitoring Division, APS-400. Project management functions and responsibilities are shared between the FAA and the systems engineering and integration contractor (SEIC). Maintenance and Automation Program management functions relative to MPS Enhancement implementation encompass technical, financial, program office and schedule management planning responsibilities. Allocation of MPS Enhancement requirements development, procurement, implementation, and logistic support responsibilities is as follows.
- a. <u>APS-400</u>, <u>Navigation/Landing and Facility Monitoring Division</u>. Maintenance Automation Program management, hardware and software procurement, hardware configuration management.
- b. APS-410, Software and Program Support Program Branch. MPS project management encompassing MMS and IMCS development; monitor and control software (MCS) requirements analysis; National Airspace Integrated Logistic Support (NAILS); system validation and configuration management (national-level NAS change proposal (NCP) for ARTCC and GNAS site preparation); testing, integration and RMMS networking; scheduling and budget/finance.
- c. <u>APS-430</u>, <u>Maintenance Processors Program Branch</u>. MPS project management encompassing MPS enhancements procurement and implementation; funding for initial MPS enhancements training, initial MPS enhancement sparing, and initial MPS enhancement (1 year) maintenance; final hardware/software RMMS configuration; Maintenance Control Center (MCC) implementation.
- d. <u>APS-100, Facilities Integration Division</u>. Space configuration management, power connection configuration management.
- e. <u>ASM-160</u>, <u>National Automation Engineering Field Support Sector</u>. Modification engineering; development of site Electronic Equipment Modifications (EEM) describing site installation and user requirements; software maintenance; development of site program bulletins (SPB) describing procedures for software rehosting; documentation; baseline

configuration management; shakedown test planning and conduct; key site test planning and conduct.

- f. ASM-230, Planning and Budgeting Program. Project staffing requirements; programming operations funds; management of operations-funded contract maintenance.
- g. AAC-400, FAA Depot, Mike Monroney Aeronautical Center. Receipt of MPS enhancement spares from the MPS contractor; logistic support planning and coordination with APS-430; logistic support of fielded MPS enhancement equipment to consist of supply support, provisioning (beyond initial spares provided under contract) and maintenance (after warranty expires).
- h. AAC-900 FAR Academy, Mike Monroney Aeronautical Center. Provision and administration of MPS enhancements pre-requisite and refresher technical training.
- i. <u>ACT-100</u>, <u>Engineering Division</u>, <u>FAA Technical Center</u>. Development of MPS enhancement hardware and software evaluation and integration test plans and procedures; MPS enhancement and peripheral performance evaluation testing; FAA integration testing; MPS enhancement implementation planning support.
- j. <u>ALG-300. Contracts Division</u>. Preparation and management of contract award activities: contract management.
- k. APT-300, Technical Training Division. Personnel and technical training management.
- 1. SEIC. Systems Engineering and Integration Contractor. Project management support and planning, including development and maintenance of program milestone and project summary schedules; development and coordination of MPS enhancements logistic support requirements.
- m. <u>Contractor</u>. Delivery, installation and integration of MPS enhancement hardware and software, maintenance and initial training as required by the MPS Enhancement contract.
- 51. <u>PROJECT CONTACTS</u>. The following personnel are involved in the management and planning of MPS enhancements implementation efforts, and are the project contacts for MPS enhancements implementation.

Position	Name C	<u>)rganizatio</u>	Telephone Comm./FTS
Project Manager	Alan Moore	APS-430	(202) 646-/967-2093
Contracting Officer	Abe Tennenbaum	ALG-310	(202) 267-/267-3655
Contracting Technical Officer's Representative (COTR)	Dean Christy	APS-430	(202)646-/967-5705
Project Lead	Dean Christy	APS-430	(202)646-/967-5705
Test Lead	Ray Dayton	SEIC	(202)646-/967-5534
Evaluation Testing	John Wiley	ACT-110	(609) 484-/482-6805
Integration Testing	John Wiley	ACT-110	(609)484-/482-6805
EEM Development	Frank Buck	ASM-160	(609) 484-/482-6236
Shakedown Testing	Lou Hodac	ASM-160	(609) 484-/482-6236
Configuration Management - Hardware - Software	Frank Buck Frank Happel	ASM-160 ASM-160	(609)484-/482-6236 (609)484-/482-6236
Logistic Support	Don Brown Bob Geary	SEIC SEIC	(202)646-/967-6953 (202)646-/967-5885
Provisioning	Jim Nettleton	AAC-485B	(405) 686-/747-4661
Regional Liaison	Paul TeSelle	APS-430	(202)646-/967-5586
Site Implementation	Paul TeSelle	APS-430	(202)646-/967-5586
Training Support	Bob Whitfield Ben McWatters Bill Collins	ASM-210 AAC-942 SEIC	(202)267-/267-8292 (405)686-/749-2710 (202)646-/967-5542
Scheduling Support	Bill Burgner	SEIC	(202)646-/967-5707

52. PROJECT COORDINATION. APS-430 coordinates maintenance automation development, procurement, implementation and logistic support requirements through the following agency organizations.

- a. ASM-300, Telecommunications Management and Operations Division.
 - b. APS-100, Facilities Integration Division.
 - c. ALG-300, Contracts Division.
 - d. APT-300, Technical Training Division.
 - e. AAC-400, FAA Depot, Mike Monroney Aeronautical Center.
- f. AAC-900, FAA Academy, Mike Monroney Aeronautical Center.
- g. Regional Offices: coordination of site equipment deliveries; system configuration management.
- 53. <u>PROJECT RESPONSIBILITY MATRIX</u>. Figure 5-1 presents the external and internal organizational elements responsible for major project functions.
- 54. PROJECT MANAGERIAL COMMUNICATIONS. MPS Enhancement project status is reviewed on a monthly basis by the NAS Program Status Review Board (PSRB), and by APS-430 at FAA headquarters in Washington, D.C. These reviews assess the technical, schedule and cost status of the program; they are summarized in PSRB reports. In addition, the following managerial communications tools (reports, briefings, working groups, teams, etc.) are used on the MPS Enhancement project.
- a. <u>Weekly Project Status Meetings</u>. Weekly project status meetings will be held by APS-430 to provide for general-purpose progress reporting, discussion and resolution of problems, requests for information, and policy notification on a direct basis. Participants include representatives from the offices listed in paragraphs 50 and 52 (except for the regional offices).

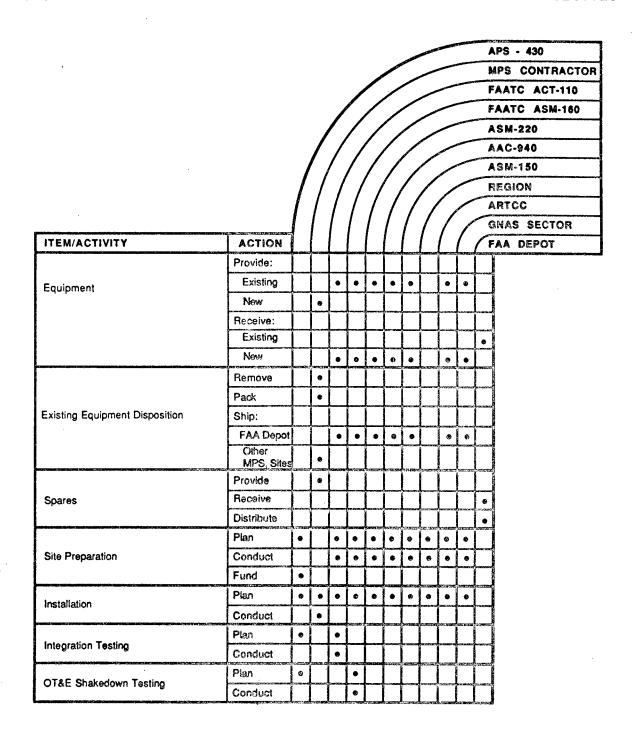


FIGURE 5-1. PROJECT RESPONSIBILITY MATRIX

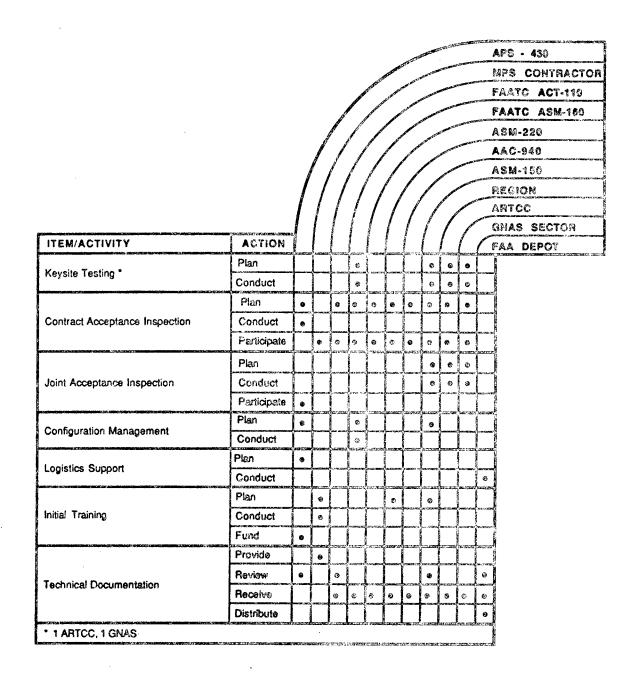


FIGURE 5-1. PROJECT RESPONSIBILITY MATRIX (CONT'D)

b. <u>Regional Status Reports</u>. Regional status reports will cover the technical progress and cost performance associated with preparation, installation, integration and test of each site and will be submitted on a schedule to be determined by the MPS Enhancement project manager.

- c. <u>Program Management Status Reports</u>. Program Management Status Reports (PMSR) will be submitted by the MPS contractor, and will describe work progress, updated milestone schedules, and any potential or actual problem areas encountered during the course of implementing MPS enhancements.
- d. NAS Integrated Logistic Support Management Team. FAA
 Depot logistic support approach and requirements relative to
 implemented MPS enhancements support were identified and
 coordinated through the NAS Integrated Logistic Support
 Management Team (NAILSMT). Associated decisions were recorded
 in NAILSMT minutes, distributed to participants and reflected in
 updates to the Integrated Logistic Support Plan (ILSP).
- e. <u>Project Status Dissemination</u>. General information relative to MPS enhancements procurement and implementation status is disseminated to the regions and throughout FAA headquarters through periodic project status memoranda. Project status will also be made available to technicians in the field through existing communications media such as the APS "Tieline," and the MPS hotline, (202)827-7752.
- f. <u>Briefings</u>. Bargaining unit representatives will be briefed as appropriate on the MPS Enhancement project and its effect on the maintenance technician workforce at the national, regional and local levels. Other briefings will occur as required.
- g. Letters of Agreement. A trilateral letter of agreement (LOA), dated February 9, 1988, is in coordination between APS-430, ACT-110, and ASM-160. It constitutes a mutual agreement to provide technical assistance, expertise and support to APS-430 in the procurement and implementation of the MPS Enhancement Project. Expertise will be supplied to APS-430, as required, in the following areas: master test planning, Electronic Equipment Modification (EEM) and Site Program Bulletin (SPB) development, project implementation planning, integration testing, Operational Test and Evaluation (OT&E), and equivalency test planning.

55. IMPLEMENTATION STAFFING. Implementation staffing will be required to support the recording of alerts, alarms and MMS data using paper logs and the manning of facilities during system operational unavailability at each site scheduled to receive MPS enhancements. Additional implementation staffing requirements/activites are presented in chapter 7. The responsibility for determining additional implementation staffing requirements, which vary by site, and the means for satisfying these requirements remains with each region and/or MPS site.

- 56. <u>PLANNING AND REPORTS</u>. The documentation (plans, reports) referenced in this PIP in relation to MPS enhancements site implementation is listed below.
 - a. MPS Enhancement Integrated Logistic Support Plan.
 - b. MPS Enhancement Subsystem Training Plan.
 - c. MPS Enhancement Master Test Plan.
- d. Evaluation Test Plans, Procedures and Reports, pre-award.
- e. Hardware/Software FAA Integration Test Plans and Reports, post-award.
- f. Shakedown Test Plans and Procedures, and Key-Site test Reports.
- g. Electronic Equipment Modification (EEM) Handbook Chapter.
 - h. Site Program Bulletin (SPB).
 - i. Deployment Readiness Review (DRR) Report.
 - j. Joint Acceptance Inspection (JAI) Report.
- 57. <u>APPLICABLE DOCUMENTS</u>. The following documents are referred to in this PIP, and provide technical specifications, information, policy and directives applicable to this implementation. Conflict between these and other documents should be brought to the project manager for resolution.

a. FAA-E-2782, RMMS Core System/Segment Specification, dated July 14, 1986.

- b. NAS-SS-1000, NAS System Specification, Volume 5, dated November 1986.
- c. NAS-MD-790, Remote Maintenance Monitoring Subsystem Interface Control Document, dated April 11, 1986.
- d. MPS Enhancement Integrated Logistic Support Plan (ILSP).
 - e. MPS Enhancement Subsystem Training Plan (STP).
- f. NAS Project Statusing and Baseline Schedule Change Control Procedures.
- g. NAS Program Deployment Readiness Review, Draft FAA order and ADL Memorandum (dated February 19, 1987).
 - h. LCN/User System IRD NAS-IR-21020000
 - i. MPS/Automation Subsystem IRD NAS-IR-51030002
 - j. MPS/ACCC IRD NAS-IR-21015103
 - k. MPS/NCC (NADIN II) IRD NAS-IR-51034302
 - 1. VSCS/MPS IRD NAS-IR-51034201
 - m. MPS/FSDPS IRD NAS-IR-51032301
 - n. MPS/NADIN MSN (1A) NAS-IR-51034301
 - o. NMCE/MPS IRD NAS-IR-41015103
- 58. <u>CONTRACT MANAGEMENT</u>. Management of the MPS Enhancement contract will be performed by the Contracts Division, Acquisition and Materiel Service of the FAA, and APS-430 as described below.
- a. <u>Contracting Officer (CO)</u>, designated by the Acquisition and Materiel Service, Contracts Division, Air Traffic Control (ATC) Automation/Flight Information Branch, ALG-310, will perform general procurement and contract management activities relative to the MPS enhancement contract.

This includes monitoring the MPS contractor's deliveries, conducting progress reviews as necessary, and performing any other duties required to ensure that the terms of the contract are met by the MPS contractor. The CO is the only person authorized to make any changes that will affect price, equipment quantities, deliverables or schedules.

- b. A <u>Contracting Officer's Technical Representative</u> (<u>COTR</u>), designated by the MPS enhancement project manager in APS-430, will provide technical guidance and direction to the MPS contractor within the scope and life of the MPS Enhancement contract.
- CONFIGURATION MANAGEMENT. APS-430 is responsible for configuration management of each MPS site, during the installation of MPS enhancements, from the time the MPS is shut down until Joint Acceptance Inspection (JAI) at ARTCC's and GNAS's, and completion and signing of Form DD-256 at FAA support sites. The MPS contractor will provide the Maintenance Automation Program COTR or designee with a configuration items index list which will contain the part nomenclature, revision level and engineering release number for all equipment the MPS contractor has installed at each site to achieve the MPS enhancement. Configuration management responsibilities will transfer from APS-430 to ASM-160 upon successful conclusion of JAI at each ARTCC and GNAS. The transfer will be formalized in JAI-required documentation. The configuration items index list provided by the MPS contractor to the Maintenance Automation Program CCTR or designee will be handed over to ASM-160 during the transfer of configuration management responsibility from APS-430 to ASM-160. This list will be transferred by ASM-160 to the site, and used by the site to perform configuration control of the enhanced MPS. ASM-160 will retain a copy of the list to perform configuration management of the enhanced MPS.

CHAPTER 6. PROJECT FUNDING

- 60. <u>PROJECT FUNDING STATUS, GENERAL</u>. Funding for this project has been approved through fiscal year (FY) 1989 (see Congressional Budget appropriation for NAS Plan 6-01).
- 61. REGIONAL REQUIREMENTS. Limited funding for regional activities such as implementation planning and site preparation is being budgeted by APS-400. Additional funding for FAA site preparation, and on-site installation, checkout and acceptance test support will be provided to each region through a Program Authorization (PA). Funding has been authorized as follows: ARTCC's \$25,000; GNAS and support sites \$10,000. If additional funding is required, an MPS site must submit a justification for addditional funding along with engineering estimates to APS-400 by October 3, 1988. APS-400 will consider each request on a case-by-case basis. The funding will support MPS enhancement implementation for the following.
- a. <u>Site Preparation</u>. The cost of materials used in performing required site preparation will be funded by APS-400.
- b. <u>Site Installation</u>. All installation costs against Facility and Equipment (F&E) will be funded by APS-400.
- c. <u>Installation Planning</u>. Regional installation planning and ASM-160 EEM/SPB development and validation activities will be funded by APS-400.
- d. <u>Training</u>. Funding for initial training only will be provided by APS-400. Pre-requisite and refresher training will be funded through AAC-940.
- e. <u>Spares</u>. APS-400 will provide funding to support procurement of initial MPS enhancement spares. Additional sparing will be funded by AAC-480.
- f. <u>Surge Suppression/Power Conditioning</u>. Funding for surge suppression/power conditioning requirements for the enhanced MPS systems will be provided by APS-400.
- 62-69. RESERVED.

CHAPTER 7. DEPLOYMENT

- 70. General Deployment Aspects. Deployment of MPS enhancements will be coordinated through APS-430 with the MPS contractor. Site deliveries of new equipment are scheduled between September 2, 1988 and October 31, 1988. Equipment installation will occur in accordance with appendix 1 of this PIP. Delivery of equipment removed from a site (see appendix 2 herein) will occur at the time of or before the installation of new equipment. Coordination of scheduled installations will be finalized at each site through a site briefing to be conducted fifteen days prior to each scheduled installation (five days prior at the FAA Technical Center, ACT-110's system). The purpose of these briefings is to review the MPS contractor's proposed method of achieving installation and testing of MPS enhancements, and to coordinate requirements for accommodating site-peculiar constraints (such as access, security, etc.). Other deployment aspects associated with the implementation of MPS enhancements are discussed in the paragraphs below.
- a. NAS Change Proposals Supporting MPS Enhancements Implementation. Three NAS Change Proposals (NCP) are being initiated and coordinated through APS-430 to support MPS enhancements implementation. They are described below.
- (1) An NCP (NCP number 10661, case file number P5200-MPS-002) has been initiated and is being coordinated through APS-430 Configuration Control Board (CCB) to bring the MPS enhancements into the NAS. The same NCP initiates the EEM handbook chapter that will provide required details on site installation support activities. The associated configuration control decision (CCD) will detail MPS enhancements deployment and implementation.
- (2) ASM-160 has initiated an NCP to bring current MPS equipment layout into configuration baseline (at ARTCC's only), and current MPS equipment into equipment baseline (at ARTCC's and GNAS Sectors only). MPS contractor-installed MPS enhancements and associated equipment changes will be documented in a configuration items index list to be provided by the MPS contractor to the site, after each installation. This list will be used as a configuration baseline from which to perform configuration management of the MPS enhancements, and will be updated as required by ASM-160 to reflect changes in equipment

revision levels and nomenclature as part of warranty or maintenance actions.

- (3) Another NCP (NCP number 10679, case file number P5200-MPS-001) has been initiated and is being coordinated through an APS-430 CCB to specify a standardized floor space (footprint) arrangement to be achieved at each MPS ARTCC site following completion of MPS enhancements installation. The NCP proposes to use the same original space allocated to the MPS and standardize the configuration. The associated CCD will approve the configuration baseline for the MPS enhancement equipment space allocation.
- b. <u>Deployment Readiness Review</u>. As required by ADL policy issued in a Memorandum dated February 19, 1987, a Deployment Readiness Review (DRR) will be conducted in November 1988 by APS-430 prior to equipment delivery to the first operational site. The formal DRR briefing to AAF-2 will occur after MPS enhancements are installed at the FAA Technical Center, and after integration testing is conducted by ACT-110. The purpose of the DRR is to determine the readiness of site personnel and procedures to deploy (i.e., install, integrate, operate and support) the augmented MPS in the operational environment. The outcome of the DRR will be a deployment decision, and may involve the resolution of action items identified during the DRR process.
- Site Deliveries. Delivery of MPS enhancements hardware and software will begin seven days after the delivery order is placed with the MPS contractor (upon contract award) and will continue through the end of October 1988 and will be coordinated by APS-430. ARTCC and GNAS key sites, as well as all other sites receiving MPS enhancements will be issued an EEM handbook chapter in which equipment and peripherals being implemented will be listed by national stock number (NSN). Delivery of MPS enhancements will be performed by the MPS contractor to the following sites: FAA headquarters in Washington, D.C. (ASM-220's system); the FAA Technical Center in Atlantic City, NJ (ACT-110's and ASM-160's systems); the Mike Monroney Aeronautical Center in Oklahoma City, OK (AAC-940's and ASM-150's systems); twenty-three ARTCC's; and ten lead GNAS sectors in accordance with the provisions of paragraph 72 herein. Spares will be delivered to the FAA Depot in Oklahoma City, OK.

71. SITE PREPARATION. The site preparation activities required to support implementation of MPS enhancements will be performed by assigned Airways Facility (AF) division or sector personnel prior to the MPS contractor's scheduled installation activities. In general, site preparation will consist of verifying that electrical receptacles and communications lines are available or installed, ensuring that heating, ventilation and air conditioning (HVAC) is appropriate to support enhanced MPS operations, and confirming that site floor loading characteristics are sufficient to support the weight of the enhanced MPS. Specific site preparation requirements will vary in accordance with the site-peculiar needs of an ARTCC, GNAS Sector office or FAA support site. General site preparation requirements are addressed below. Site-peculiar preparation requirements are summarized herein. Site preparation requirements are driven by the MPS enhancement equipment physical requirements described in chapter 3 of this PIP.

- a. <u>Site Access Requirements</u>. The physical characteristics of site access points, such as entranceways, ramps, stairwells, hallways, etc. must accommodate the passage of MPS enhancement components to the floor locations specified in appendix 3 herein. Site personnel should refer to chapter 3 of this PIP to obtain the physical dimensions of each MPS enhancement hardware component, and compare these dimensions to site access measurements. If site access requirements cannot be through standard or usual passages, appropriate alternative provisions must be made to accommodate equipment delivery and installation.
- b. Floor Loading Requirements. Selected AF personnel will need to estimate and ensure the capability of the computer room floor to support the additional equipment loads imposed by MPS enhancement hardware in the designated configurations. The weight associated with each MPS enhancement hardware component is presented in figure 7-1. Site personnel will need to determine the combined weight of MPS enhancements with existing/remaining MPS hardware to estimate floor loading tolerances. If additional measures are required to accommodate floor-load integrity, they must be performed in time to support scheduled MPS contractor installations.
- c. Required Cabling. Cabling external to the MPS (e.g., power cables, communications cables) will be supplied and installed by each site prior to MPS contractor installation. System internal cabling (used to connect MPS equipment enhancements to existing equipment) will be supplied by the MPS

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PRODUCT	COMPONENT NAME	WEIGHT	1	/					-	AC-940
IDENT		(Lbs)		L	L				Jan S	SM-150
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4134	Disc Subsystem (XL4)	683								
5130	Tape Subsystem (200 IPS)	860						C C C C C C C C C C C C C C C C C C C		
5104	Tape Subsystem (125 IPS)	520°	•		•	•	•	•		
7123	System Cabinet	600°			•	•	۰			
7107	Expansion Cabinet	350°					•			
6100	Communications Subsystem	736								
5518	Printer (Dot-Matrix)	465								
5520	Printer (Serial Matrix)	67					,			

^{*} Approximate fully loaded weights

FIGURE 7-1. MPS ENHANCEMENT EQUIPMENT WEIGHTS
FOR FLOOR LOADING TOLERANCES

contractor (see chapter 3 of this PIP). This generally includes all interconnecting cables, however, the conductor ribbon cables currently used to connect the existing 0.5-MB memory boards to the NonStop II's (2 cables per board) will be reused by the MPS contractor to achieve installation of the new 2-MB memory boards. To support installation of the fiber-optics extension (FOX) link at the FAA Technical Center between ACT-110's and ASM-160's systems, a 100-micron fiber-optic cable will be supplied by ACT-110. The cable will need to be terminated using the FOX cable terminator kit supplied by the MPS contractor.

- Power Requirements. Site personnel must ensure that adequate AC power is provided to support enhanced MPS component operations, as described below, and summarized in figure 7-2 (AC connections). The power requirements cited herein are associated with the enhancements only, and must be evaluated against existing equipment power requirements, according to the floor plans (see appendix 3) and equipment removal list (see appendix 2), in order to determine whether additional power outlets, cables, etc., are neccessary to support the installation. Outlets connected to the critical bus require twist-lock power receptacles. Each site with twist-lock power receptacles must supply the MPS contractor with a male plug capable of insertion into the twist-lock receptacle for each device requiring connection to the critical bus. contractor will replace standard plugs with twist-lock compatible male plugs provided by the site.
- (1) System cabinets, expansion cabinets and tape drive cabinets will each require the following.
- (a) One ten foot long AC power cable terminated with tape or wire nuts, consisting of a 5-wire, 8-gauge (40 amp, rated 600 volts or heavier) cable supplying 3-phase, 208 volts, 60 Hz AC power.
- (b) Voltage between phase lines at a nominal 208 volts.
- (c) Voltage between a phase line and neutral at a nominal 120 volts.
- (d) Circuit breakers installed in the computer room power panel rated at 40 amps.

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PRODUCT	COMPONENT NAME	AC CONNECTOR	-	/					1	AAC-940
IDENT								/		ASM-150
4130	Disc Subsystem (XL8)	Two NEMA IG-L6-15R	1.			1.	Γ.	Ι.		
4134	Disc Subsystem (XL4)	Two NEMA IG-L6-15R						ļ		
5130	Tape Subsystem (200 IPS)	NEMA IG-L6-20R		Ì].			
5104	Tape Subsystem (125 IPS)	5 wire cable	 .	 	i .	 . 	<u> </u>	 .		
7123	System Cabinet	5 wire cable	.			١.				
7107	Expansion Cabinet	5 wire cable	1			l				
6100	Communications Subsystem	NEMA IG-L21-20R	1.			† .		•		
5518	Printer (Dot-Matrix)	NEMA IG-5-15R								
5520	Printer (Serial Matrix)	NEMA IG-5-15R			١.					

FIGURE 7-2. AC CONNECTIONS REQUIRED TO SUPPORT INSTALLATION OF MPS ENHANCEMENTS

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(2) The system cabinet array at each site will require one center-ground power receptacle (NEMA IG-5-15R) to be provided for every ten feet along the array. These receptacles must be fed from the computer room power distribution panel to prevent electrical noise from affecting test equipment, and will not use the critical bus. Receptacle use should be limited to service equipment. Receptacles should not be used as convenience receptacles, or for powering peripheral equipment.

- (3) XL8 and XL4 disk subsystems will each require two power receptacles (NEMA IG-L6-15R) on separately-branched circuits of 220 volts (plus or minus 20%), at 43 to 63 Hz, to be located within three feet of the disk drive cabinet.
- (4) The 200 IPS tape subsytems will each require one standard, center-ground power receptacle (NEMA IG-L6-20R) on a 20 amp, 208 volt AC circuit located within three feet of the tape drive cabinet.
- (5) Each printer and terminal will require one standard, center-ground power receptacle (NEMA IG-5-15R), 15 amps, 120 volts, to receive a standard three-pronged plug. Receptacles must be located within ten feet of the peripheral devices.
- (6) At ARTCC's the OSP will require one standard, center-ground twist-lock power receptacle (NEMA IG-L5-15R), 15 amps, 120 volts. At GNAS Sector offices and support sites, the OSP will require one standard, center-ground power receptacle (NEMA IG-5-15R), 15 amps, 120 volts, to receive a standard three pronged plug. Receptacles must be located within ten feet of the OSP.
- (7) The 6100 communications subsystem will require one power receptacle (NEMA IG-L21-20R) on a 20 amp, three phase, 208 volt AC circuit, located within three feet of the communications subsystem cabinet.
- (8) Electrical devices unrelated to the MPS will require connection to adequate, clearly-marked convenience receptacles for power. These receptacles must not be fed from the computer room distribution panel, as devices connected to these outlets could feed electrical noise back into the computer power system.

e. Operating Environment. Each site must ensure that adequate environmental conditions are available to support MPS system performance after enhancement. Additional air conditioning requirements may be imposed by the additional thermal load created by the new MPS components. The operating environment requirements associated with individual MPS enhancement components are presented in chapter 3 of this PIP. The operating environment for the aggregate of enhancements is presented herein. Acceptable operating limits for the enhanced MPS are 60 to 85 degrees Fahrenheit and 42% to 70% relative humidity, non-condensing. Thermal drift should not exceed 5 degrees Fahrenheit per hour. Enhancements to the MPS will increase the thermal load (expressed in British thermal units (BTU)) for each site as follows.

Site ARTCC's	Additional BTU's/Hour	Total <u>BTU's/Hour</u>
Kansas City All Others	8,800 25,100	48,500 47,000
Lead GNAS Sectors	No net increase	17,000
FAA Headquarters (ASM-220's system)	11,000	39,700
FAA Technical Center (ACT-110's system)	39,700	65,900
FAA Technical Center (ASM-160's system)	27,500	60,400
FAA Academy (AAC-940's system)	3,745	41,700
FAA Academy (ASM-150's system)	22,300	39,300

Site personnel will need to determine whether the thermal loads cited above require increased air conditioning capacity to meet site requirements. If so, provision must be made to ensure that the operating environment is accommodated before the MPS contractor begins site installation.

- f. Storage Environment. MPS enhancement components requiring storage must be stored at the same temperature and relative humidity as stated in paragraph 71e.
- 72. <u>DELIVERY</u>. Site deliveries of new equipment are scheduled between September 3, 1988 and October 31, 1988. Equipment is scheduled for installation at sites on the dates presented in appendix 1 of this PIP. All dates are expressed in terms of days after the delivery order was placed, August 26, 1988. Installation schedule and priority flexibility will be accommodated by the MPS contractor within forty-five days of notification prior to scheduled delivery by APS-430.
- INSTALLATION PLAN. The regional, APS-430 and MPS contractor activities and responsibilities associated with the implementation of MPS enhancements are defined in terms of the installation sequence that will be followed at ARTCC, GNAS and support sites. Specific installation direction covering preand post-installation procedures, pre- and post-installation floor layouts, and preparation requirements will be contained in an electronic equipment modification (EEM) issued to regional personnel at all sites receiving MPS enhancements. The EEM will define the procedures to be followed by site personnel for shutting down the MPS, demonstrating the operational status of the pre-enhanced MPS for MPS contractor acceptance, and monitoring MPS contractor installation and checkout activities. Instructions for loading the rehosted applications software (IMCS and MMS software) and for re-installing the Guardian operating system (OS) on the enhanced MPS will be issued to the regions in a site program bulletin (SPB). The SPB will include two deliveries of magnetic tapes, one consisting of the new system configuration file, and the other of the rehosted IMCS and MMS software. Each site is required to notify APS-430 if any equipment necessary to achieve MPS enhancement installation is inoperable, and cannot be repaired prior to scheduled installation. The sequence of activities required for implementation of MPS enhancements at ARTCC's, GNAS's and FAA support sites has been divided into four phases, and is described below for each type of site.
- a. <u>Installation Sequence</u>, <u>Activities and Responsibilities at ARTCC's</u>. The installation sequence, activities and responsibilities are expressed in terms of pre-contract award, pre-installation, installation, and post-installation phases. The contractor's MPS installation activities will be limited to six consecutive calendar days, broken out as described below,

and as presented in table 7-1. Total system operational unavailability is limited to a maximum of sixty-eight consecutive hours, as broken down in table 7-2.

- (1) <u>Pre-Contract Award Phase</u>. A site-specific, pre-installation MPS hardware (equipment) configuration baseline will be established by an NCP initiated by ASM-160, as described in paragraph 70 herein. Pre-installation MPS equipment layouts will be provided each site in the EEM. Each site will be required to be in the configuration baseline by the time the MPS contractor begins installation activities.
- Pre-Installation Phase. This phase includes all site AF personnel activities required to shut down IMCS and MMS software, demonstrate and turn over the MPS system to the MPS contractor in preparation for MPS contractor installation. EEM and SPB will provide the sites direction for the pre-installation and installation support activities required to enable MPS enhancements installation to be performed by the MPS contractor. Installation requirements will be reviewed and discussed with the MPS contractor at a site installation briefing to be conducted fifteen days prior to the scheduled installation (five days prior to installation at the FAA Technical Center, for ACT-110's system). Upon IMCS and MMS software shut down, and until the enhanced MPS is accepted by the site, each site will be required to maintain paper logs of alarms, alerts, and other MMS-maintained information, and to capture NAPRS data on personal computers (PC). pre-installation phase culminates in MPS contractor acceptance of the existing MPS, after its operational status has been demonstrated to the MPS contractor. Pre-installation activities supporting the scheduled MPS contractor installation must be completed at each site by the date specified on appendix 2, are limited to twelve hours, and will be witnessed by the MPS contractor, who will receive all system test printouts. Pre-installation activities encompass, at a minimum, the following activities, which will be described in detail in the EEM and the SPB.
- (a) Edit the configuration file (as required) provided with the SPB on magnetic tape to reflect the site-specific configuration.
 - (b) Shut down MMS software.

Table 7-1. MPS Contractor Timeframes for Installation Activities at ARTCC's and FAA Support Sites

MPS CONTRACTOR ACTIVITY	MAXIMUM DURATION
Pre-Installation	2 Days
Installation	2 Days
Post-Installation	2 Days

Table 7-2. Total System Operational Unavailability at ARTCC's and FAA Support Sites (except for FAA Headquarters)

IMPLEMENTATION PHASE	MMS	FION IMCS
Pre-Installation	12 Hours	1 Hour
<pre>Installation - Hardware Installation and Reconfiguration - Checkout</pre>	24 Hours 24 Hours	24 Hours 24 Hours
Post-Installation	8 Hours	8 Hours
Total System Operational Unavailability	68 Hours	57 Hours

(c) Back up all system subvolumes and databases to tape twice.

- (d) Backup MMS subvolumes.
- (e) Test all asynchronous communications controllers not used by IMCS.
- (f) Run any other tests as mutually agreed upon between ASM-160 and the MPS contractor.
 - (g) Shut down IMCS.
 - (h) Run processor micro-diagnostics.
 - (i) Perform OSP checkout.
- (j) Run any other tests as mutually agreed upon between ASM-160 and the MPS contractor.
- (k) Hand-off of tested MPS hardware to the MPS contractor.
- <u>Installation Phase</u>. The installation phase encompasses all activities performed by the MPS contractor to: remove designated equipment (see appendix 2); physically relocate the remaining MPS equipment to the floor locations prescribed in the post-installation floor layouts (see appendix 3), rack board listings (see appendix 4), and patch panels, patch panel inserts, battery back-up and I/O power supply unit listings (see appendix 5); and physically and electronically integrate MPS enhancements. The MPS contractor will perform all installation activities within forty-eight consecutive hours, as presented in Table 7-2, following MPS contractor acceptance of the MPS equipment previously validated during pre-installation. Site personnel will monitor the installation against those same layouts as provided in the EEM. The MPS contractor's installation will include, at a minimum, the following activities.
- (a) Removal of the Non-Stop II processors, associated cabling and peripherals as described in paragraph 95 of this PIP.

(b) Physical reconfiguration of the MPS hardware in accordance with post-installation site equipment floor layouts, rack board listings, and patch panels, patch panel inserts, battery back-up and I/O power supply unit listings provided in the procurement package, and in accordance with the equipment separation constraints described in paragraph 32c of this PIP.

- Installation of MPS enhancement hardware. (C) This may include replacing processor, I/O disk controller, or memory boards (the revision levels of which may be inadequate to support the installation). A preliminary determination of site-specific board change-out requirements (i.e., boards requiring upgrade to allow integration of MPS hardware) will be included in the EEM. The MPS contractor may also need to replace any defective hardware prior to completing the installation. At the conclusion of the installation, the MPS contractor will provide the sites with a configuration items index list of all equipment installed, including any hardware that was replaced (because the revision level was inadequate or the equipment was faulty) to achieve the installation. The list will specify the equipment nomenclature, revision level, and engineering release for each component installed.
- (d) Performance of installation checkout and acceptance tests to validate that integrated enhancements operate satisfactorily. The same tests (see paragraph 73a(2)) used by site personnel to demonstrate the operational status of the MPS system to the MPS contractor during the pre-installation phase will be used by the MPS contractor to demonstrate the performance of the enhanced MPS to the FAA after the enhancements are physically and electronically integrated. The Maintenance Automation Program COTR, or designated representative, will witness all tests. At a minimum, the MPS contractor will perform the checkout activities described in chapter 8 of this PIP.
- (e) Packaging of all hardware removed during the installation by the MPS contractor shall be in accordance with (IAW) the Maintenance Processor Subsystem Enhancements Procurement (DTFA01-88-B-06649) as follows.
- 1. Hardware shall be packaged for shipment in accordance with the best commercial practice for insuring arrival at the required destination in an undamaged condition.

2. Equipment to be shipped to the FAA Depot shall be preserved and packaged IAW MIL-STD-17555H, "Electronic and Electrical Accessories and Provisioned Items (Repair Parts): Packaging of, Level "A" and Packed, Level "B". All packages shall be marked IAW MIL-STD-129J, "Marking for Shipment and Storage", and shall be Bar Coded IAW MIL-STD-1189A "Standard DOD Symbology".

- 3. Packaging of equipment to be removed from a site shall be in accordance with appendix 2, and shall be individually packed by the MPS contractor in contractor-provided packaging. The MPS contractor is encouraged to re-use the packaging material used to ship MPS enhancements to the sites.
- 4. Electrostatic Discharge Sensitive (ESDS) items shall be identified IAW DOD-STD-1686, "Electrostatic Dicharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (excluding Electrically Initiated Explosive Devices)". ESDS items shall be preserved, packaged and packed IAW ESDS requirements of MIL-STD-129J and Bar Coded IAW MIL-STD-1189A.
- (4) <u>Post-Installation Activities</u>. Post-installation activities will be performed by regional personnel as described in the EEM and SPB. Post-installation activities are divided into three sub-phases, as described below.
- (a) A Contract Acceptance Inspection (CAI) will be conducted on site by the Maintenance Automation Program COTR, or designated representative, for each MPS site installation. The MPS contractor will participate in the inspection as required. The MPS contractor's packaging and labeling of removed equipment destined for the FAA Depot, will be inspected by APS-430 or designated representative. Successful conclusion of this inspection, and of MPS contractor testing and checkout, will signify that APS-430 has approved and accepted the enhancement hardware and the installation.
- (b) The MPS contractor will ship removed hardware items being used at another GNAS or FAA support site in accordance with appendix 2. Removed items destined for the FAA Depot (see appendix 2) will be packaged by the MPS contractor and shipped by the regions.
- (c) Assigned AF personnel will rehost and checkout IMCS and MMS software on the enhanced MPS. Software

rehosting will be performed by site personnel using the magnetic tapes obtained with the SPB. Using the pre-installation phase back-up tapes, site personnel will restore all necessary files, databases and other application software. Assigned personnel will verify the accuracy of the MPS contractor's documentation, and will conduct checkout tests on the rehosted software using the test scripts contained in the SPB to verify the operation of the integrated enhanced MPS system andto validate that MMS software and IMCS function correctly. A site-specific subset of the shakedown tests that were conducted by ASM-160 at the FAA Technical Center will be developed and performed by designated site personnel to assess the readiness of the enhanced system, including procedures and personnel, to assume site-specific operational status. Site shakedown testing will be conducted within the post-installation timeframes shown in table 7-2, between the milestone dates presented in paragraph 41. Upon successful testing of the rehost effort, site acceptance of the enhanced MPS from the Maintenance Automation Program COTR, or designated representative, will be formalized through a Joint Acceptance Inspection (JAI) and associated required documentation (e.g., Form DD-256).

- (d) Regional AF technicians will update MMS data to include the paper logs maintained during system unavailability. This will consist of performing keyboard entry of the MMS data (corrective and preventive maintenance and certification actions) recorded manually on paper logs. Log entries automatically generated by MMS software after rehost may have to be closed.
- Installation Sequence, Activities and Responsibilities at GNAS Sector Office Sites. The installation sequence, requirements, activities and responsibilities associated with implementation of MPS enhancements at GNAS's are the same as for ARTCC's, except that in addition to installing new MPS enhancement equipment, the MPS contractor will be installing MPS equipment removed from ARTCC's to achieve MPS enhancements implementation. All installations will be completed by the MPS contractor within five consecutive days, broken out as described Total system operational unavailability for in table 7-3. GNAS's is limited to a maximum of forty-four consecutive hours, as broken down in table 7-4. Appendix 1 of this PIP presents a list of MPS enhancements to be installed at GNAS Sector office sites. Appendix 2 identifies existing MPS equipment to be removed from GNAS MPS sites.

Table 7-3. MPS Contractor Timeframes for Installation Activities at GNAS's

MPS CONTRACTOR ACTIVITY	MAXIMUM <u>DURATION</u>
Pre-Installation	2 Days
Installation	1 Day
Post-Installation	2 Days

Table 7-4. Total System Operational Unavailability at GNAS's

IMPLEMENTATION PHASE		<u>DURAT</u> MMS	<u>ION</u>	IMCS
Pre-Installation	12	Hours	1	Hour
Installation - Hardware Installation		TV annua		
and Reconfiguration - Checkout	_	Hours Hours	_	Hours Hours
Post Installation	8	Hours	8	Hours
		- A THE STREET CONTROL OF THE STREET CONTROL		
Total System Operational Unavailability	44	Hours	33	Hours

Installation Sequence, Activities and Responsibilities at FAA Support Sites. The installation sequence, requirements, activities and responsibilities associated with implementation of MPS enhancements at FAA support sites are the same as for ARTCC's, except that the MPS contractor will be installing MPS equipment removed from ARTCC's, along with the new equipment procured under the contract, to achieve MPS enhancements implementation. installations will be completed by the MPS contractor within six consecutive days, as broken out in table 7-1. Except for FAA headquarters, total system operational unavailability at FAA support sites is limited to a maximum of sixty-eight consecutive hours, as presented in table 7-2. Total system operational unavailability at FAA headquarters is limited to a maximum of ninety-two consecutive hours, as broken down in table 7-5. Appendix 1 (MPS enhancement equipment) and appendix 2 (existing MPS equipment to be removed) present lists of equipment to be installed and removed at all five FAA support sites. Support sites that do not maintain MMS log information as part of their duties will not be required to maintain paper logs of MMS data, nor perform keyboard entry of data recorded on paper logs into the MMS software database. Site acceptance of the enhanced MPS following conduct of a CAI by APS-430, testing of the rehosted MMS software and IMCS, and verification of the MPS contractor's documentation will be formalized through the completion and signing of Form DD-256 by the Maintenance Automation Program COTR or designated representative, and the site representative.

74-79. <u>RESERVED</u>.

Table 7-5. Total System Operational Unavailability at FAA Headquarters

		DURAT	ION	
IMPLEMENTATION PHASE		MMS		IMCS
Pre-Installation	32	Hours	16	Hours
Installation - Hardware Installation				
and Reconfiguration	24	Hours	24	Hours
- Checkout	24	Hours	24	Hours
Post Installation	12	Hours	12	Hours
				
Total System Operational				
Unavailability	92	Hours	76	Hours

11/9/88 6140.15

CHAPTER 8. VERIFICATION

- 80. <u>FACTORY VERIFICATION</u>. All MPS enhancement hardware and software items subject to implementation under this PIP are commercial-off-the-shelf (COTS) equipment and software. The MPS contractor will perform all commercially-acceptable product testing prior to shipment of the MPS enhancement equipment to the designated locations.
- 81. <u>CHECKOUT</u>. MPS enhancement checkout activities comprise MPS contractor checkout testing and Government testing as described below.
- a. <u>Contractor Checkout Testing</u>. The MPS contractor will conduct checkout tests at each site installation of MPS enhancements. This will encompass performance of tests to verify that MPS enhancement components perform to the MPS contractor's specifications, and to verify the preliminary performance of the enhanced MPS. At the FAA Technical Center, these tests will be performed in accordance with the MPS contractor's installation, checkout and acceptance test plan. At the site, they will be performed in accordance with the MPS contractor's commercial test procedures tailored for each type of site.
- b. <u>Government Checkout Activities</u>. Government checkout activities encompass benchmark testing, conducted by ACT-110 at the FAA Technical Center, to verify and validate MPS enhancement equipment performance against the MPS contractor's specifications.
- 82. <u>CONTRACTOR INTEGRATION TESTING</u>. The MPS contractor will demonstrate the acceptability of the enhanced MPS systems by conducting the same demonstration tests that were performed by site personnel before shutting down the MPS. MPS contractor tests will include, at a minimum, conduct of the following.
 - a. Guardian OS functionality.
 - b. OSP checkout.
 - c. Processor micro-diagnostics.
 - d. TMDS diagnostics.

Demonstration tests will be conducted in accordance with the MPS contractor's installation, checkout and acceptance test plan at the FAA Technical Center (ACT-110's system), which will be reviewed in an installation briefing five days prior to installation. Demonstration tests will be performed in accordance with installation, checkout and acceptance test procedures, which will be available for review by site personnel at least fifteen days prior to the scheduled site installation briefing. Comments by site personnel on installation, checkout and acceptance test procedures should be available for discussion with the MPS contractor at a site installation briefing to be conducted fifteen days prior to the scheduled installation. AF site personnel will witness the integration tests and record the results in a site acceptance test report.

- 83. CONTRACT ACCEPTANCE INSPECTION (CAI). A contract acceptance inspection will be conducted by the Maintenance Automation Program COTR or designee at each MPS site, at the conclusion of all MPS contractor site installation, checkout and acceptance testing, and equipment packaging activities. The Maintenance Automation Program COTR or designee will review the MPS contractor's acceptance test results, the completeness of the configuration items index, and the adequacy of removed equipment packaging and labeling. Test data and technical documentation will also be reviewed during CAI. Successful conclusion of the CAI signifies APS-430 acceptance of the MPS enhancement equipment installed at the site for which the CAI is conducted. Acceptance is formalized by the completion and signing of Form DD-256 by the Maintenance Automation Program COTR or designated representative, and the site representative.
- 84. FAA INTEGRATION TESTING. Integration testing of MPS enhancements will be conducted by ACT-110 (after the first of two deliveries) at the FAA Technical Center to determine the performance of the enhanced MPS configuration, rehosted with IMCS and MMS software. FAA integration testing will be performed in accordance with the integration test plan and procedures developed by ACT-110. Integration test results will be compiled by ACT-110 in an integration test report.
- 85. SHAKEDOWN AND CHANGEOVER. Operational test and evaluation (OT&E) shakedown test activities will be performed by ASM-160 at the FAA Technical Center to determine the degree to which the enhanced MPS is ready to assume operational status. This will encompass development and conduct of tests by ASM-160 to assess the suitability of enhanced MPS performance in an operational

11/9/88 6140.15

setting, the adequacy of associated operating procedures, and the viability of trained personnel to operate and maintain the system at GNAS and ARTCC sites. A site-specific, subset of the shakedown tests will be developed and performed by designated site personnel to assess the readiness of the enhanced system, including procedures and personnel, to assume site-specific operational status. This may encompass some of the same shakedown tests performed by ASM-160 at the FAA Technical Center, or a modification of those tests by the site for site-specific applications. The EEM will provide additional details on other tests to be conducted at each type of site (i.e., GNAS or ARTCC).

- 86. <u>JOINT ACCEPTANCE INSPECTION</u>. After the EEM activities (see paragraph 87), and operational site shakedown testing at the operational sites, a JAI will be conducted at those sites to verify the following items.
- a. Completeness and acceptability of all MPS contractor site installations, modifications and acceptance demonstrations as certified by the CAI results.
 - b. Completion of EEM activities.
 - c. Completeness and adequacy of site shakedown testing.
- d. Capability of each site to fulfill integrated logistic support requirements.
 - e. Completeness and adequacy of site documentation.
- f. Adequacy of site personnel for operating and maintaining the MPS.
 - g. Adequacy of JAI discrepancy resolutions.

Successful completion of the JAI is formalized in required JAI documentation between the site and APS-430. The JAI constitutes formal acceptance of site-integrated MPS enhancements by the site from APS-430, and transfers configuration control responsibility and support to the region.

87. <u>KEY SITE TESTING</u>. Other Government test activities include key site testing of MPS enhancements, conducted at the first operational ARTCC (ZHU) and the first operational GNAS (DFW) by ASM-160. The primary purpose of key site testing is to validate

the EEM and SPB pre-installation procedures for MPS shutdown, and post-installation procedures for software rehosting, re-entry of MMS log data, and running test scripts. Validation of the EEM will occur at the first operational site (also the first keysite) (ZHU), and at the third operational site (also the second keysite) (DFW). The EEM and SPB will be finalized for national distribution, and issued to regions at the conclusion of key site testing.

88-89. <u>RESERVED</u>.

CHAPTER 9. INTEGRATED LOGISTIC SUPPORT

- MAINTENANCE CONCEPT. The maintenance concept associated with logistic support of newly-implemented MPS enhancements comprises site- and depot-level hardware and software maintenance to be implemented in two phases. During both phases, site-level maintenance will be performed by site personnel, trained as described in paragraph 91 herein, and will be limited to the performance of diagnostics, and pull-and-replace actions on failed or faulty line replaceable units (LRU). Under the first phase of maintenance support, depot-level maintenance will be provided through a warranty agreement with the MPS contractor for the first year after site implementation. Faulty or failed LRU's will be returned directly to the FAA Depot from the site for repair or replacement. Under the warranty agreement, the MPS contractor's equipment mean-time-to-repair (MTTR) is 48 hours. The second phase of depot-level maintenance support will be assumed by the FAA Depot upon expiration of the warranty agreement. Failed or faulty LRU's will be shipped to the FAA Depot for replacement or The MPS contractor will identify support tools and test equipment required for the life-cycle support of MPS enhancement hardware.
- 91. TRAINING. Selected AF site personnel will be trained in the diagnosis of failed or faulty LRU's through hardware and software maintenance classes as specified in the MPS Enhancement Subsystem Training Plan (STP). Hardware and software maintenance training classes will be distributed between the first and last operational site installations to allow students from each facility to be fully trained prior to their site undergoing equipment installation. The hardware and software maintenance training classes will be scheduled sequentially so that a student can be trained on both hardware and software maintenance without a break in continuity.
- a. <u>Fault Diagnosis</u> Selected AF personnel will be trained to perform fault diagnostics on the following hardware and software items.
 - (1) Hardware.
 - (a) Tandem 1435, NonStop TXP.
 - (b) Tandem 1G and 1H, OSP Upgrade.

(c) Tandem 4130 (XL8) and 4134 (XL4) disk drives, along with the Tandem 3108 disk controller.

- (d) Tandem 5104-B, 125 IPS tape drive, along with the Tandem 3207 tape controller.
- (e) Tandem 6100-series communications equipment and systems.
 - (f) Tandem 5130-1 200 IPS tape drive.
 - (q) Tandem 5518 dot matrix line printer.
- (h) Tandem 6304 asynchronous communications controller extension board.
 - (i) Tandem 7501 asynchronous patch panel.
- (j) Tandem 7301 input/output-only power supply unit.
 - (k) Tandem 6700 fiber-optic extension.
 - (1) Tandem 5520 high-speed serial matrix printer.
 - (m) Tandem 6120 line interface unit, RS-232-C.
 - (n) Tandem 6140 line interface unit (LIU-4).
 - (2) Software.
 - (a) Tandem 9086, Measure.
 - (b) Tandem 9071, VIEWSYS.
 - (c) Tandem Guardian 90XF.
 - (d) Tandem TMF.
 - (e) Tandem 6100 ADCCP.
 - (f) Tandem ATP6100.

- b. MPS hardware and software maintenance training outcomes and objectives.
 - (1) Hardware.
- (a) Locate and identify all assemblies and subassemblies.
- (b) Perform system power-up, power-down, start-up, start-over, recovery, and change of operational modes.
- (c) Perform configuration and reconfiguration in accordance with system requirements.
- (d) Perform periodic diagnostic software tests on the system components and associated peripheral equipment and visually inspect all indicator lights to determine equipment operational status.
- (e) Analyze and identify problems by interpreting results of functional and diagnostic tests.
- (f) Use functional and flow diagrams to localize malfunctions to the appropriate assembly.
- (g) Use proper test equipment, functional diagrams, and system support software to isolate malfunctions to the line replaceable unit (LRU).
- (h) Perform removal and replacement of faulty PCB's or components properly on off-line equipment, with no service interruption.
 - (2) Software.
- (a) Perform systems generation and configuration consistent with the latest operating system release provided by the MPS contractor.
- (b) Write control functions using special function keys.
- (c) Evaluate an audit trail created as part of recovery methods used to protect a data base.

(d) Analyze system performance to optimize system configuration.

- (e) Develop systems applications using support software.
- c. <u>Pre-requisite IMCS and MMS Application Training</u>. Students scheduled to receive MPS hardware and software maintenance training will need to have completed the following pre-requisite training courses.
 - (1) Hardware.
- (a) 44415, "Microprocessors" 120 hours (3 weeks), AAC-940.
- (b) 43495, Tandem T-16 Processor Maintenance (4 weeks).
- (c) 47404, Fundamentals of Data Communications (1 week).
 - (2) Software.
 - (a) 43522 Tandem Systems Management (4 weeks).
- (b) 47404 Fundamentals of Data Communications (1 week).
- 92. <u>SUPPORT TOOLS AND TEST EQUIPMENT</u>. The MPS contractor will provide his own support tools and test equipment as required to achieve the installation.
- 93. <u>SUPPLY SUPPORT</u>. MPS enhancements supply support will be achieved through the FAA Depot. An initial supply of spares is being procured by the program office and will be shipped for storage at the FAA Depot. A provisioning conference will be scheduled during a joint NAS integrated logistic support management team (NAILSMT)/ILS guidance conference. MPS enhancement components will be broken down during the provisioning conference to assess additional supply support requirements for the life-cycle support of the fielded MPS enhancements. Spare parts will be available at the FAA Depot;

site stocks will be available at each site. Supply support of spare parts will be handled under the MPS contractor's warranty, by the MPS contractor, for any supplies required as a result of repair actions (under the warranty agreement) during the first year after site implementation.

- 94. <u>VENDOR DATA AND TECHNICAL MANUALS</u>. The MPS contractor will provide the following support documentation to APS-430 and to each MPS site.
 - a. Technical manuals.
 - (1) Operator/users manuals.
 - (2) Hardware repair manuals.
 - (3) Installation requirements (space and power).
 - (4) Installation and equipment removal instructions.
 - (5) Software development tools list.
 - (6) Diagnostics/diagnostic interpretations.
 - (7) Maintenance instructions.
 - (8) Overhaul instructions.
 - (9) Schematics and wiring diagrams.
 - b. Provisioning Technical Documentation (PTD).
 - (1) LSA-061 Report, Parts Master File.
 - (2) Spare Parts-Peculiar List.
 - (3) Long-Lead Items List.

In addition, all class materials distributed to students during the MPS enhancements hardware and software maintenance training class will be retained by each student. A spare set of the instruction materials will be available at the FAA Academy.

95. <u>EQUIPMENT REMOVAL</u>. Tandem NonStop II processors will be removed from ARTCC's by the MPS contractor during the

installation phase. This equipment will either be shipped to GNAS's or FAA support sites to support the implementation of MPS enhancements at those sites. Appendix 2 of this PIP presents a site-specific equipment removal and destination list. In general, the following equipment will be removed from sites and returned to the FAA Depot.

- a. Disk drives (including disk packs and cabling).
- b. Disk controllers.
- c. Disk patch panels.
- d. Patch panel cabinets.
- e. 0.5-MB memory boards.

Packaging of all equipment removed by the MPS contractor to achieve MPS enhancements, which will be shipped to the FAA Depot, will be performed by the MPS contractor in accordance with paragraph 73.a(3)(e) herein, and will be subject to FAA inspection during the contract acceptance inspection (CAI). Shipment of the equipment removed from an ARTCC will be performed by the MPS contractor for all equipment destined for GNAS or support site implementation. Site personnel will be responsible for shipping the remaining removed equipment to the FAA Depot.

96. <u>FACILITIES</u>. Facility impacts associated with MPS enhancements implementation are those resulting from fulfilling the site preparation requirements detailed in chapter 7 of this PIP.

97-99. RESERVED.

APPENDIX 1. MPS ENHANCEMENT INSTALLATION SCHEDULE

The MPS contractor will deliver hardware, spares, software, support, documentation and manuals to each MPS site. The Guardian operating system (OS) will be delivered to each site as required. Installation will be in accordance with the following schedule. A description of each item follows the schedule.

MPS SITE/ LOCATION	<u>item</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
FAA Technical C ACT-110 MPS SITE # 25	enter,		
(Delivery 1)			
_ ,	2500A	1	7
	5030A	1	7
	5032A	1	7
	5033A	1	7
	5034A	. 1	7
	5091	2	7
	5092	2	90
	5093	2 3 2 4	90
	6001	2	7
	6002	4	7
	6003	1	7
	6005	1	7
	6006	4	7
•	6008	1	7
	6009	1	7
	6010	1	7
•	6011	1 2 2 1	7
	6012	2	7
	6013	1	7
·	6014	1	7
	6016	4	7
	6029	1	7
	6029A	2	7
	6029B	37	7
	6029C	8	7

6140.15 Appendix 1

MPS SITE/	ITEM	QUANTITY	WITHIN DAYS AFTER
LOCATION	LIER	QUANTITI	DELIVERY ORDER*
FAA Technical Center,			
ACT-110			
MPS SITE # 25			
(Delivery 2)	05000	•	F.7
	2500B	1 3 3 1 4	57 57
	6001	3	57
	6002	3	57
	6005	1	57
	6006	4	57
	6010	1	57
	6011	3	57
	6012	3 3 2	57
	6015	2	57
	6019	1	57
	6020	. 1	57
	6021	· 1	57
	6022	ĺ	57
	6023	ī	57
	6024	ī	57
		1 · · · · ·	
	6025	1	57
	6026	2	57
	6026A	2	57
	6027	2	57
	6027A	2	57
•	6028	1	57
Mike Monroney		·	
Aeronautical Center,			
AAC-940 MPS SITE # 27			
MES SIID # 2/	2700	1	59
	5030B	1	59 59
	5030B 5032B	1 1	59 59
	5032B	3	59 59
	5033B 5034B	1 1	59 59
	3034D		29
	5091	2	59
	5092	2 9	5 9
•	5093	8	59

MPS SITE/			WITHIN DAYS AFTER
LOCATION	ITEM	QUANTITY	DELIVERY ORDER*
		QUANTITI	DELIVERI ORDER*
	6001	_	
	6001	2	59
	6002	8	59
	6003	1	59
	6005	ī	59
•	6006	4	
	6006	4	59
	6008	1	59
	6009	ī	
	6010		59
		1	59
	6011	1	59
	6012	1	59
	6012	•	·
	6013	1	59
	6014	1	59
	6015	1	59
	6016	4	59
	6029	i	59
	0025	1	59
	6029A	1	59
	6029B	22	59
	6029C	8	
	00290	8	59
••			
Houston ARTCC (ZHU)			
MPS SITE # 8			
	0800	1	101
	5030B	1 1 1 1	
		1	101
	5032B	1	101
•	5033B	1	101
	5034B	1	101
•		_	202
	5091	2 2	101
•	5092	2	101
	5093	1	101
	6001		
		2 2	101
	6002	2	101
•	6003	1	101
	6005	1 1	
		<u>.</u>	101
	6006	4	101
	6008	1 1	101
	6009	1	101
		. -	
	6010	1	101
	6011	1 2	101
		~	101

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6012	2	101
	6013	ī	101
	6014	ī	101
	6016	4	101
	6029	i	101
	6029A	2	101
•	6029B	37	101
	6029C	8	101
Ft. Worth ARTCC	(7 EU)		
MPS SITE # 6	(ZFW)		
	0600	1	108
	5030B	1	108
	5032B	1	108
	5033B	. 1	108
	5034B	1	108
	5091	2	108
	5092	2	108
	5093	2 2 1	108
	6001	2	108
	6002	2	108
	6003	1	108
	6005	ī	108
	6006	4	108
	6008	1	108
	6009	1	108
•	6010	1	108
	6011	1 2	108
	6012	2	108
	6013		108
	6014	1	108
	6016	4	108
	6029	7	108
	6029A	1 2	108
	6029B	37	108
	6029C	8	108
	00230	•	100

			•
MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
Dallas/Ft. Worth AFS (DFW)		,	
MPS SITE # 29			
, – ,	2900	1	132
	5030B	i	
	5030B 5032B		132
•	5091	1 2 1	132
		2	132
	5092	1	132
	5093	1	132
	6002	4	132
	6007	2	132
	6017	ĺ	132
	501,	₩.	132
New York ARTCC (ZNY) MPS SITE # 22			
	2200	1	139
	5030B	i	139
	5030B		
		1	139
	5033B	1	139
	5034B	1	139
	5091	2	139
	5092	2	139
	5093	1	139
	6001	2	139
	6002	2	139
	6000	_	
	6003	1	139
	6005	1	139
	6006	4	139
	6008	1	139
	6009	1	139
	6010	1	139
	6011	2	139
	6012	1 2 2 1 1	139
	6013	د 1	
	6014	1	139
	0014		139
	6016	4	139
	6029	1	139
	6029A	1 2	139
	-	_	137

6140.15 Appendix 1

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6029B 6029C	37 8	139 139
Memphis ARTCC (ZME)			
MPS SITE # 13		_	
	1300	1	139
	5030B 5032B	1	139
	5032B 5033B	1 1 1	139
	5033B 5034B	1	139 139
	3034B	Τ.	139
	5091	2	139
	5092	2 2 1 2 2	139
	5093	ī	139
	6001	2	139
	6002	2	139
	6003	1	139
	6008	1	139
	6009	1	139
	6010	1	139
	6011	2	139
•	6012	2	139
	6013	1	139
	6014	1	139
	6016	4	139
	6018	1	139
	6018B	4	139
	6029	1 2	139
• *	6029A		139
	6029B	37	139
	6029C	. 8	139
Memphis AFS (MEM) MPS SITE # 30			
	3000	1	146
	5030B	1	146
	5032B	1	146
	5091	1 1 2 1	146
	5092	1	146

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
•	5093	1	146
	6002	4	146
	6007	2	146
	6017	1	146
	0017	1	146
Atlanta ARTCC (ZTL) MPS SITE # 5			
	0500	. 1	146
	5030B	ī	146
	5032B	ī	146
	5033B	ī	146
	5034B	ī	146
			140
	5091	2	146
	5092	2	146
	5093	1 2	146
	6001	2	146
	6002	2	146
	6003	1	146
	6005	1 4	146
	6006	4	146
	6008	1	146
	6009	1	146
	6010	1	146
	6011	2	146
	6012	1 2 2 1	146
	6013	1	146
	6014	. 1	146
•	6016	4	146
	6029	1	146
•	6029A	2	146
•	6029B	37	146
	6029C	8	146
Kansas City ARTCC (ZKC) MPS SITE # 1	•		
· = · · · · · · · · · · · · · · · · · ·	0100	1	220
	5030B	1 1	220
	5030B	1	220
	JUJZD	1	220

6140.15 Appendix 1

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	5033B	. 1	220
	5034B	1	220
	5091	2	220
	5092	2	220
	5093	1	220
		_	
	6001	2	220
	6002	2	220
	6003	1 1	220
	6008	1	220
	6009	1	220
	6010	1	220
$\varphi(C)$	6011	, <u> </u>	220
	6012	1 2 2	220
	6013	· 1	220
	6014	$ar{f 1}$	220
	0014		
	6016	4	220
	6018	2	220
	6018B	8	220
	6029	1	220
	6029A	2	220
,			000
8	6029B	37	220
	6029C	8	220
Boston ARTCC (ZBW) MPS SITE # 23			
1110 0211 10	2300	1	153
•	5030B	1 · · · · 1	153
	5032B	1	15 3
	5033B	ī	153
	5034B	ī	153
•	5001	3	153
	5091 5092	2 2 1 2 2	153 153
		4	153 153
	5093	<u> </u>	
	6001	2	153
	6002	2	153
	6003	1	153
	6005	1 1 4	15 3
·	6006	4	153

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6008	1	152
	6009	i	153 153
	6010	1	153 153
•	6011	1 2	153
	6012	2	153
	0012	2	153
	6013	1	153
	6014	ī	153
•	6016	1 4	153
	6029	i	153
	6029A	2	153
			133
	6029B	37	153
	6029C	8	153
St. Louis AFS (STL) MPS SITE # 34			
	3400	1	160
	5030B	ī	160
	5032B		
	5091	÷	160
	5092	1 2 1	160
	3032	.	160
	5093	1	160
	6002	6	160
	6007	2	160
	6017	1	160
Chicago ARTCC (ZAU) MPS SITE # 4			
•	0400	1	160
	5030B	1	160
	5032B	1	160
•	5033B	1 1 1	160
	5034B	1	160
	5091	2	160
	5092	2	160
	5093	<u> </u>	160
	6001	2	160
•	6002	2 2 1 2 2	160
	6003	1	160

6140.15 Appendix 1

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6005 6006 6008 6009 6010	1 4 1 1	160 160 160 160
	6011 6012 6013 6014 6016	2 2 1 1 4	160 160 160 160
	6029 6029A 6029B 6029C	1 2 37 8	160 160 160 160
Los Angeles ARTCC (ZLA) MPS SITE # 2			
MFS SITE # Z	0200 5030B 5032B 5033B 5034B	1 1 1 1	167 167 167 167 167
	5091 5092 5093 6001 6002	2 2 1 2 2	167 167 167 167
	6003 6005 6006 6008 6009	1 4 1 1	167 167 167 167 167
	6010 6011 6012 6013	1 2 2 1 1	167 167 167 167 167

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6016	4	167
•	6029	1	167
	6029A	2	167
	6029B	37	167
	6029C	8	167
Indianapolis ARTCC (ZID)			
MPS SITE # 19			
	1900	1	167
	5030B	1	167
•	5032B	1	167
•	5033B	1	167
	5034B	1	167
	5091	2	167
	5092	2	167
•	5093	ī	167
	6001	1 2	167
	6002	2	167
	6003	1	167
	6005	1	167
	6006	4	167
	6008	1	167
	6009	1	167
	6010	1	167
	6011	2 2	167
	6012	2	167
,	6013	1 1	167
	6014	1	167
	6016	4	167
•	6029	1	167
	6029A	2	167
·	6029B	37	167
	6029C	8	167
Seattle ARTCC (ZSE) MPS SITE # 14			
.	1400	1	174
	5030B	ī	174
	= 	_	#/~

6140.15 Appendix 1

MPS SITE/	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
-	delikondet tillet i videlikon mendikon.	Company Company (Company (Company Company (Company Company (Company Company (Company Company C	ADMINISTRAÇÃO DE MANAGEMENTA A MANAGEMENTA (COME A PROFESSIONAL DE MANAGEMENTA DE
	5032B	### 	174
	5033B	. 1	174
	5034B	1	174
	5091	2	174
	5092	2	174
	5093	1	174
	6001	2 2 1 1	174
	6002	2	174
	6003	1	174
	6005	1	174
	6006	4	174
	6008	1	174
	6009	ī	174
	6010		174
	6011	1 2	174
	6012	2	174
	6013	1	174
	6014	1	174
	6016	Ą	174
	6029	1	174
	6029A	2	174
	6029B	37	174
	6029C	8	174
		•	
Washington ARTCC (ZDC)		·	
MPS SITE # 21			
MPS SIIE # ZI	2100	1	174
•	5030B	1	174
	5030B 5032B		174
	5032B 5033B	1	
•		1 1	374
	5034B	Į.	174
	5091	2	174
	5092	2 2 1 2 2	174
	5093	1	174
	6001	2	174
	6002	2	174
·	6004	. 1.	174

Page 12

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
			DUDITUENT ORDER
	6005	. 1	174
	6006	4	174
	6008	1	174
	6009	1	174
	6010	1	174
	6011	2	174
•	6012	2 2 1 1	174
	6013	<u></u>	174
	6014	ī	174
	6016	4	174
	6029	1	174
	6029A	1 2	174
	6029B	37	174
	6029C	8	174
Albuquerque ARTCC (ZAB) MPS SITE # 10			
	1000	1	181
	5030B	ī	181
	5032B	ī	181
	5033B	ī	181
	5034B	1	181
	5091	2	181
	5092	2	181
	5093	1 2	181
	6001	2	181
	6002	2	181
	6003	1	181
	6005	1	181
	6006	4	181
•	6008	1	181
	6009	1	181
	6010	1	181
	6011	2	181
	6012	2	181
	6013	1	181
	6014	ī	181

6140.15 Appendix 1

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	and the supplement of the supp	county county to a velocities in the state of the state o	The state of the s
	6016	4	181
	6029	1	181
	6029A	2	181
	6029B	37	181
	6029C	8	181
Jacksonville ARTCC (ZJX) MPS SITE # 9			
MPS SITE # 9	0000	*	a en e
	0900	1	181
	5030B	1	181
	5032B	1	181
	5033B	1	181
	5034B	1	181
	5091	2	181
,	5092	2	181
	5093	1	181
	6001	2 2	181
	6002	2	181
	6003	1	181
	6005	1	181
	6006	4	181
	6008	1	181
	6009	1 1	181
	6010	1	181
	6011	2	181
	6012	2	181
	6013	1 2 2 1	181
<i>,</i>	6014	1	181
	6016	4	181
•	6029	1 2	181
	6029A	2.	181
•	6029B	37	181
	6029C	8	181
Denver ARTCC (ZDV) MPS SITE # 17	d.		
.	1700		188
•	5030B	1 .	188
			or vi

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	5032B	1	188
	5033B	ī	188
	5033B 5034B		188
	5091	2	188
	5091	1 2 2	188
	5092	2	188
	5093	1	188
•	6001	2	188
	6002	1 2 2	188
	6003	ī	188
	6005	ī	188
	0003	-	100
	6006	4	188
	6008	1	188
	6009	1	188
	6010	1	188
	6011	2	188
	6012	2	188
	6013	ī	188
	6014	ī	188
	6016	4	188
	6029	1	188
	6029	7	100
	6029A	2	188
	6029B	37	188
	6029C	8	188
Minneapolis ARTCC (ZMP)			
MPS SITE # 18		•	
•	1800	1	188
	5030B	1	188
	5032B	1 1 1	188
•	5033B	1	188
	5034B	1	188
	5091	2	188
	5092	2	188
	5093	ī	188
	6001	2	188
	6002	2 2 1 2 2	188
	6003	1	188

MPS SITE/ LOCATION	<u>ITEM</u>	<u>QUANTITY</u>	WITHIN DAYS AFTER DELIVERY ORDER*
	6005	1	188
	6006	4	188
	6008	1	188
	6009	1	188 188
	6010	1	100
	6011	2	188
	6012	2	188
	6013	1	188
	6014	1	188
	6016	4	188
	6029	1	188
	6029A	2	188
	6029B	37	188
	6029C	8	188
Salt Lake City ARTCC (ZLC)			
MPS SITE # 16			
•	1600	1	195
	5030B	1	195
	5032B	1	195
	5033B	1	195
•	5034B	1	195
	5091	2	195
	5092	2 1 2 2	195
	5093	1	195
	6001	2	195
	6002	2	195
	6003	1	195
	6005	1	195
	6006	4	195
	6008	1	195
	6009	1	195
	6010	1 2 2 1	195
	6011	2	195
	6012	2	195
	6013	1	195
	6014	1	195

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6016 6029 6029A 6029B 6029C	4 1 2 37 8	195 195 195 195 195
Cleveland ARTCC (ZOMPS SITE # 20	OB)		
	2000 5030B 5032B 5033B 5034B	1 1 1 1	195 195 195 195 195
	5091 5092 5093 6001	2 2 1 2	195 195 195 195
	6002 6003 6005 6006 6008 6009	2 1 1 4 1	195 195 195 195 195 195
	6010 6011 6012 6013 6014	1 2 2 1 1	195 195 195 195 195
	6016 6029 6029A 6029B 6029C	4 1 2 37 8	195 195 195 195 195
Oakland ARTCC (ZOA) MPS SITE # 12	1200 5030B 5032B	1 1 1	202 202 202

6140.15 Appendix 1

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	5033B	1	202
	5034B	$\overline{\mathtt{1}}$	202
	5091	2	202
	5092	2	202
	5093	1 2 2 1	202
	6001	2	202
	6002	2	202
	6003	2 2 1	202
	6005	1	202
	6006	4	202
	6008	1	202
	6009	1	202
	6010	1	202
	6011	2 2	202
	6012	2	202
	6013	1	202
	6014	1	202
	6016	4	202
	6029	1	202
	6029A	2	202
	6029B	37	202
	6029C	8	202
Miami ARTCC (ZMA) MPS SITE # 11			
	1100	1	202
	5030B	1	202
	5032B	1	202
	5033B	1	202
	5034B	1	202
	5091	2 2	202
•	5092	2	202
	5093	1	202
	6001	2	202
	6002	2	202
	6003	1	202
	6005	1	202
	6006	4	202

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6008	1	202
	6009	ī	202
	6010	ī	202
	6011	2	202
	6012	2	202
	0012	2	202
	6013	1	202
	6014	i	202
	6016	4	202
	6029	i	202
	6029A	2	202
	0023A	2	202
	6029B	37	202
	6029C	8	202
		_	
Honolulu ARTCC (ZHN) MPS SITE # 15			
MFS SIIE # IS	1500	1	209
	5030B	1	209
	5030B 5032B		209
		1 1	209
	5033B	1	209
	5034B	1	209
	5091	2	209
•	5092	2 2 1 2 5	209
	5093	้า	209
	6001	2	209
	6002	5	209
	0002	3	203
	6003	1	209
•	6005	ī	209
•	6006	1 4 1	209
	6008	i	209
	6009	i	209
		-	200
	6010	1	209
•	6011	1 2	209
	6012		209
	6013	2 1	209
	6014	ī	209
	VV	-	200
	6016	4	209
	6029	i	209
•	6029A	2	209
		_	_ ***

6140.15 Appendix 1

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6029B 6029C	37 8	209 209
San Juan ARTCC (ZSU) MPS SITE # 7			
	0700	1 1	209
	5030B	1	⁻ 209
	5032B	1 1	209
	5033B	1	209
	5034B	1	209
	5091	2	209
	5092	2	209
	5093	1	209
	6001 6002	2 5	209 209
	0002	5	209
	6003	1	209
	6005	1	209
	6006	4	209
	6008	1	209
	6009	1	209
	6010	1 2 2	209
	6011	2	209
	6012	2	209
	6013	1	209 209
	6014	T	209
	6016	4	209
	6029	1 2	209
	6029A 6029B	2 37	209 209
	6029C	8	209
•	00290	, o	209
Fairbanks AFS (FAI) MPS SITE # 38			
	3800	1	216
	5030B	1	216
	5032B	1	216
	5091	2	216
	5092	1	216

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	5093	1	216
	6002	4	216
	6007	2	216
	6017	1	216
« Norfolk AFS (ORF) MPS SITE # 31			
	3100	1	216
	5030B	1	216
	5032B	1	216
	5091	2	216
	5092	1	216
	5093	1	216
	6002	4	216
	6007	2 1	216
	6017	1	_. 216
Anchorage ARTCC (ZAN) MPS SITE # 3			
	0300	1	223
	5030B	1	223
	5032B	1	223
	5033B	1	223
	5034B	1	223
	5091	2	223
	5092	2 1 2	223
	5093	1	223
	6001	2	223
	6002	5	223
	6003	1 1	223
	6005	1	223
	6006	4	223
	6008	1 1	223
	6009	1	223
	6010	1	223
	6011	2	223
	6012	2	223
	6013	1 2 2 1 1	223
	6014	1	223

6140.15 Appendix 1

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6016	4	223
	6029	1	223
	6029A	2	223
	6029B	37	223
	6029C	8	223
FAA Headquarters MPS SITE # 24			
HIS SIII # 24	2400 5030B 5032B 5034B 5091	1 1 1 2	223 223 223 223 223
	6001	4	223
	6004	1	223
	6005	2	223
	6006	8	223
	6010	1	223
	6011	4	223
	6012	4	223
	6013	1	223
	6014	1	223
	6015	4	223
	6016 6019 6027 6027A 6028	4 1 4 4	223 223 223 223 223 223
Edwards AFB (WJF) MPS SITE # 37	0028		223
	3700	1	230
	5030B	1	230
	5032B	1	230
	5091	2	230
	5092	1	230
	5093	1	230
	6002	4	230
	6007	2	230
	6017	1	230

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
Windsor Locks AFS (BI MPS SITE # 32	DL)		
"	3200	1	230
	5030B	1	230
	5032B	1	230
	5091	2	230
	5092	1	230
	5093	1	230
	6002	4	230
	6007	2	230
	6017	1	230
Wichita AFS (ICT)			
MPS SITE # 35	3500	1	237
	5030B	1	237
	5030B 5032B	i	237
	5091	2	237
	5092	ī	237
•	5093	1	237
	6002	4	237
	6007	2	237
	6017	1	237
Mike Monroney Aeronautical Center,			
ASM-150			
MPS SITE # 28		_	
	2800	1	237
•	5030B	1	237
	5032B 5034B	1 T	237 237
•	5034B 5091	1 1 2	237 237
	2021	2	231
	5092	1	237
	5093	1 2 2	237
	6001	2	237
	6002	2	237
	6004	1	237

6140.15 Appendix 1

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	6005	1	237
	6006	2	237
	6010	1 2 1 2 2	237
	6011	2	237
		2	237
	6012	2	237
	6013	1	237
	6014	1	237
	6015	1	237
	6016	1 2	237
Detroit AFS (DTW) MPS SITE # 33			
" " " " " " " " " " " " " " " " " " " "	3300	1	244
	5030B	ī	244
	5032B	1	244
	5091	2	244
	5092	1 2 1	244
	5092	<u> </u>	244
	5093	1	244
	6002	4	244
	6007	2	244
	6017	1	244
Denver AFS (DEN) MPS SITE # 36			
	3600	1	244
	5030B	1	244
	5032B	<u> </u>	244
	5091	2	244
•	5092	1 2 1	244
	5093	1	244
	6002	4	244
	6007	2	244
	6017	ī	244
		_	
FAA Technical Center ASM-160	c,		
MPS SITE # 26			
.	2600	1	251
	5030B	1	251

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
/	5032B	1	251
	5033B	1 1	251
	5034B	1	251
		1	251
	5091	1 2 2	251
	5092	2	251
	5093	2 2	251
	6001	2	251
	6002	4	251
	6003	1	251
	6005	1 2	251
	6006	8	251
	6008	i	251
	6009	ī	251 251
	6010	ī	251 251
	6011	4	251 251
	6010		
	6012	4	251
	6013	1	251
	6014	1 1 1 4	251
	6015	1	251
	6016	4	251
•	6029	1	251
	6029A	1	251
	6029B	22	251
	6029C	8	251
FAA Depot, AAC-480 (Delivery 1)			
<i></i>	5001	1	60
	5002A	2	60
	5002B		60
•	5002C	2 2	60
	5002D	2	60
	5002E	2	
	5002E 5002F	2	60
		2	60
	5002G	2	60
	5002H	2 2	60
	50021	2	60
	5002J	2	60

6140.15 Appendix 1

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	5002K	2	60
	5002L	2 2	60
	5002M	2 2	60
	5002N	2	60
	5003A	1	60
•	5005A	2	60
	5005B	2	60
	5005C	2 2 2	60
	5005D	2	60
	5005E	2	60
	5005F	2	60
	5005G	2	60
	5005H	2	60
	5005I	2 2	60
	5005J	2	60
	5005K	2	60
	5006A	3	60
	5006B	3	60
	5011A	1	60
	5011B	1	60
	5011C	1	60
	5015A	1	60
	5015B	1	60
•	5016A	2	60
	5029D	1	60
	5029E	1	60
•	5029F	1	60
	5029G	1	60
	5029H	. 1	60
	50291	1	60
	5029J `	2	60
	5029K	3	60
	5029L	20	60
	5029C	4	60

MPS SITE/ LOCATION	<u>ITEM</u>	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
FAA Depot, AAC-480 (Delivery 2)			
	5001	2	251
	5002A	3	251
	5002B	3	251
	5002C	3	251
	5002D	2 3 3 3 3	251
	5002E	3	251
	5002F	3	251
	5002F 5002G	3 3 3 3	
	5002G 5002H	3	251
	5002I	3	251
	50021	3	251
	5002J	3	251
	5002K	3	251
	5002L	3	251
	5002M	3 3 3 3	251
	5002N	3	251
	3002N	3	251
	5003A	1	251
	5005A	2	251
	5005B	1 2 2	251
	5005C	2	251
	5005D	2	251
	5005E	2	251
	5005F	2	251
	5005G	2	251
•	5005H	2	251
•	50051	2 2 2 2 2	251
	5005J	2	251
	5005K	2	
•	5005R 5006A	4	251 253
	5006B	4	251
•		4 2	251
	5011A	2	251
	5011B	2 2 2 2	251
	5011C	2	251
	5015A	2	251
	5015B	2	251
	5016A	2	251

6140.15 Appendix 1

MPS SITE/ LOCATION	ITEM	QUANTITY	WITHIN DAYS AFTER DELIVERY ORDER*
	E020D	1	251
	5029D	1	
	5029E	. 1	251
	5029F	1	251
	5029G	1	251
	5029H	1	251
	5029I	1	251
•	30291	±	
	5029J	2	251
	5029K	3	251
	5029L	40	251
	5029C	6	251

^{*} Refers to within days of MPS contractor's receipt of delivery order (DO), which occurred on August 26, 1988.

A description of each delivery item follows.

ITEM DESCRIPTION

Installation

```
0100
        Installation, Integration and Checkout for MPS Site # 1
 0200
        Installation, Integration and Checkout for MPS Site # 2
 0300
        Installation, Integration and Checkout for MPS Site # 3
        Installation, Integration and Checkout for MPS Site #
 0400
        Installation, Integration and Checkout for MPS Site # 5
 0500
 0600
        Installation, Integration and Checkout for MPS Site # 6
 0700
        Installation, Integration and Checkout for MPS Site #
 0800
        Installation, Integration and Checkout for MPS Site # 8
 0900
        Installation, Integration and Checkout for MPS Site # 9
 1000
        Installation, Integration and Checkout for MPS Site
 1100
        Installation, Integration and Checkout for MPS Site
        # 11
 1200
        Installation, Integration and Checkout for MPS Site
 1300
        Installation, Integration and Checkout for MPS Site
 1400
        Installation, Integration and Checkout for MPS Site
        Installation, Integration and Checkout for MPS Site
 1500
        # 15
        Installation, Integration and Checkout for MPS Site
 1600
        # 16
 1700
        Installation, Integration and Checkout for MPS Site
        # 17
        Installation, Integration and Checkout for MPS Site
1800
        Installation, Integration and Checkout for MPS Site
 1900
        # 19
 2000
        Installation, Integration and Checkout for MPS Site
        # 20
        Installation, Integration and Checkout for MPS Site
 2100
        # 21
 2200
        Installation, Integration and Checkout for MPS Site
 2300
        Installation, Integration and Checkout for MPS Site
 2400
        Installation, Integration and Checkout for MPS Site
        Installation, Integration and Checkout for MPS Site
2500A
        # 25 (Delivery 1)
```

<u>ITEM</u>	DESCRIPTION						
2500B	<pre>Installation, # 25 (Deliver)</pre>		and	Checkout	for	MPS	Site
2600	Installation, # 26	Integration	and	Checkout	for	MPS	Site
2700	Installation, # 27	Integration	and	Checkout	for	MPS	Site
2800	<pre>"Installation, # 28</pre>	Integration	and	Checkout	for	MPS	Site
2900	Installation, # 29	Integration	and	Checkout	for	MPS	Site
3000	Installation, # 30	Integration	and	Checkout	for	MPS	Site
3100	Installation, # 31	Integration	and	Checkout	for	MPS	Site
3200	Installation, # 32	Integration	and	Checkout	for	MPS	Site
3300	Installation, # 33	Integration	and	Checkout	for	MPS	Site
3400	Installation, # 34	Integration	and	Checkout	for	MPS	Site
3500	Installation, # 35	Integration	and	Checkout	for	MPS	Site
3600	Installation, # 36	Integration	and	Checkout	for	MPS	Site
3700	<pre>Installation, # 37</pre>	Integration	and	Checkout	for	MPS	Site
3800	Installation, # 38	Integration	and	Checkout	for	MPS	Site

Spares

Spares for Item 6001

Spares for Item 6002 as Follows:

```
FAN: AXL: 4.5 110 CFM, Part Number 23747 or Equal
5002A
        W:18AWG:UL1430 RED, Part Number 24517 or Equal
5002B
        PWA SMP BASE ASM (EX), Part Number 42540 or Equal
5002C
        ASM PANEL CNTL KEYED, Part Number 45040 or Equal
5002D
        BATTERY PACK, Part Number 51550 or Equal
5002E
        ASM UPS 60HZ W/O BAT, Part Number 52655 or Equal
5002F
        ASM P/S I/O 115V, Part Number 52730 or Equal
5002G
        POWER SUPPLY CPU, Part Number 53270 or Equal
5002H
        PWA REGULATOR I/O, Part Number 54600 or Equal
5002I
        PWA IPU RSWD, Part Number 54760 or Equal
5002J
        PWA MCB RSWD, Part Number 54770 or Equal
5002K
```

ITEM	DESCRIPTION
5002L 5002M 5002N	PWA CCD, Part Number 54840 or Equal PWA SEMI-MEM 2MB, Part Number 57740 or Equal PWA IPB CTRLR TNSII, Part Number 57840 or Equal
	Spares for Items 6003 and 6004 as Follows:
5003A	SMP BOARD, Part Number 42540 or Equal
	Spares for Items 6005 as Follows:
5005A 5005B 5005C 5005D 5005E 5005F 5005G 5005H 5005J 5005J	ASM PDU 60HZ, Part Number 40780 or Equal ASM FAN CABINET EXHA, Part Number 40782 or Equal ASM FAN PSM, Part Number 40813 or Equal CBA: CNTL TO PATCH PN, Part Number 40841 or Equal DISC DRIVE MODULE XL8, Part Number 40853 or Equal TERMINATOR CNTL D/C, Part Number 40918 or Equal PWA DISK P/S 6 OUT, Part Number 44239 or Equal PWA J BOARD, Part Number 44255 or Equal CBA: CONTROL JUMPER, Part Number 49388 or Equal CBA: CONTROL EXTERNAL, Part Number 49392 or Equal CBA: DATA EXTERNAL 35, Part Number 49395 or Equal
	Spares for Items 6006 and 6007 as Follows:
5006A 5006B	3108 CHNL I/F KIT, Part Number 40880 or Equal 3108 DISC I/F KIT/NE, Part Number 40884 or Equal
	Spares for Item 6011 as Follows:
5011A 5011B 5011C	CBA:AMADEUS P/P 16FT, Part Number 34467 or Equal PWA AMADEUS, Part Number 44384 or Equal ASM: RS232 PATCH PAN, Part Number 44407 or Equal
	Spares for Item 6015 as Follows:
5015A 5015B	PWA SBS-16 CONTROLLER, Part Number 44450 or Equal CMF ASYNC PATCH PANEL, Part Number 44568 or Equal
	Spares for Item 6016 as Follows:
5016A	ASM P/S I/O 115V, Part Number 52730 or Equal

6140.15 Appendix 1

ITEM	DESCRIPTION
	Spares for Item 6029 as Follows:
5029D 5029E 5029F 5029G 5029H 5029I 5029J 5029K	LIM, C/L, Part Number 57240 or Equal
	Spares for Item 6029B as Follows:
5029L	CLIP 1, Part Number 57070 or Equal
	Spares of Item 6029C
<u>Software</u>	
5030A	Tandem "Measure" Software Package, Product Identification 9086P or Equal
5030B	Identification 9086PD or Equal
5032A	Tandem 9071 "VIEWSYS" Software, Product Identification 9077TP or Equal
5032B	9077TPD or Equal
5033A	Tandem 6100 ADCCP Software, Product Identification 9077TP or Equal
5033B	9077TPD or Equal
5034A	or Equal
5034B	Tandem ATP6100 Software, Product Identification 9075TPD or Equal
Support a	nd Documentation
5088	Data
5089	Program Reviews
5090	Integrated Logistics Support
5091	Manuals and Documentation

ITEM DESCRIPTION

Optional Training, Services and Documentation

5092	Hardware Maintenance	
5093	Software Maintenance	
5094	Maintenance Training	Documentation

<u>Hardware</u>

6001	Tandem NonStop TXP with 8MB Memory, Product
	Identification 1435 or Equal
6002	Additional 2MB Memory for Tandem NonStop II, Product
	Identification 2422 or Equal
6003	O.S.P. Upgrade (NS II to TXP), Product Identification
	1G or Equal, for Tandem Operations and Service
	Processor (Shipped Prior to 10/1/83)
6004	O.S.P. Upgrade (NS II to TXP), Product Identification
	1H or Equal, for Tandem Operations and Service
	Processor (Shipped on 10/1/83 or Later)
6005	Tandem XL8 Disk Drive, Product Identification 4130 or
	Equal
6006	Tandem Disk Controller (XL4, XL8), Product
	Identification 3108-1 or Equal
6007	Tandem Disk Controller (XL4, XL8), Product
	Identification 3108-2 or Equal
6008	Tandem Tape Drive, 125 IPS, Product Identification
	5104-B or Equal
6009	Tandem Magnetic Tape Controller, Product Identification
	3207 or Equal
6010	Tandem System Cabinet, Product Identification 7123 or
	Equal
6011	Tandem Communications Controller, Product
	Identification 6105-1 or Equal
6012	Tandem Synchronous Patch Panel, Product Identification
	6165-1 or Equal
6013	Tandem Asynchronous Communications Controller Extension
	Board, Product Identification 6304-2 or Equal
6014	Tandem Asynchronous Patch Panel, Product Identification
	7501 or Equal
6015	Tandem Asynchronous Communications Controller, Product
	Identification 6106 or Equal
6016	Tandem Input/Output (I/O) Only Power Module, Product
	Identification 7301 or Equal

ITEM	DESCRIPTION
6017	Tandem Disk Drives (XL4), Product Identification 4134 or Equal
6018	Tandem Add-in Disk Pair, Product Identification 4131 or Equal
6018A	Tandem Control Cable for Add-in Disk Pair, Product Identification 42C-50 or Equal
6018B	Tandem Control Cable for Add-in Disk Pair, Product Identification 42D-50 or Equal
6018C	Tandem Terminator for Add-in Disk Pair, Product Identification 42T-2 or Equal
6019	Tandem High-Performance 200 IPS Tape Subsystem, Product Identification 5130-1 or Equal
6020	Tandem High-Performance Dot-matrix Line Printer, Product Identification 5518 or Equal
6021	Tandem Roman-8 Font, Product Identification 55M004 or Equal
6022	Tandem Draft Quality 7-bit USASCII Character Set, Product Identification 55M011 or Equal
6023	Tandem Roman-8 Compressed Character Font Option, Product Identification 55M012 or Equal
6024	Tandem Remote Printer Interface System Local Unit, Product Identification 55FX or Equal
6025	Tandem Remote Printer Interface System Remote Unit, Product Identification 55FR or Equal
6026	Tandem Fiber-Optic Extension, Product Identification 6700 or Equal
6026A	Tandem Fiber-Optic Connector Kit, Product Identification 7619 or Equal
6027	Tandem High-Speed Serial Matrix Printer, Product Identification 5520 or Equal
6027A	Tandem Pedestal/Paper Receptacle, Product Identification 7203 or Equal
6028	Tandem Expansion Cabinet, Product Identification 7107 or Equal
6029	Tandem Communications Subsystem, Product Identification 6101E or Equal
6029A	Tandem Communications Subsystem Add-on, Product Identification 6102E or Equal
6029B	Tandem Line Interface Unit RS-232, Product Identification 6120-1 or Equal
6029C	Tandem Line Interface Unit (LIU-4), or Product Identification 6140-1 or Equal

APPENDIX 2. MPS EQUIPMENT REMOVAL LIST

The following equipment will be removed from each indicated site. The contractor will be responsible for packaging the removed equipment and preparing it for shipment. Each individual site (S) will be responsible for equipment shipment from the site to the FAA Depot, while the MPS contractor (C) will assume responsibility for shipment of equipment to other MPS sites.

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Kansas City ARTCC (ZKC) MPS SITE # 1				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	2	S	Kansas City (ZKC) - Development System
NS II .5 Mb Memory Boards		2	s	FAA Depot
I/O Power Supply Units		3	s	Kansas City (ZKC) - Development System
System Cabinet		1	S	Kansas City (ZKC) - Development System
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable CDC 80 Mb Cab. Mount	e 4104 4105	2 2	s s	Kansas City (ZKC) - Development System
Disc Patch Panel	7504	1	s	Kansas City (ZKC) - Development System
Disc Controller Board Pairs	3106A	2	s	Kansas City (ZKC) - Development System

MPS Site/ Equipment	Tandem Product Id	<u>Qty</u>	Resp	<u>Destination</u>
Los Angeles ARTCC (ZLA) MPS SITE # 2				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Edwards AFB (WJF) MPS SITE # 37
NS II .5 Mb Memory Boards		2	С	Edwards AFB (WJF) MPS SITE # 37
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl CDC 80 Mb Cab. Mount	e 4104 4105	2 2	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Anchorage ARTCC (ZAN) MPS SITE # 3				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	FAA Technical Center - ASM-160 MPS SITE # 26
NS II .5 Mb Memory Boards		2	S	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	S	FAA Depot

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Chicago ARTCC (ZAU) MPS SITE # 4				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Detroit AFS (DTW) MPS SITE # 33
NS II .5 Mb Memory Boards		2	С	Detroit AFS (DTW) MPS SITE # 33
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Atlanta ARTCC (ZTL) MPS SITE # 5				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	C	St. Louis AFS (STL) MPS SITE # 34

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	Destination
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Ft. Worth ARTCC (ZFW) MPS SITE # 6				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Dallas/Ft. Worth AFS (DFW) MPS SITE # 29
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable 128 Mb Winchester Pair			s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	Mike Monroney Aeronautical Center - ASM-150 MPS Site # 28

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
San Juan ARTCC (ZSU) MPS SITE # 7				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Norfolk AFS (ORF) MPS SITE # 31
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Houston ARTCC (ZHU) MPS SITE # 8				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	c	Dallas/Ft. Worth AFS (DFW) MPS SITE # 29
NS II .5 Mb Memory Boards		2	С	Dallas/Ft. Worth AFS (DFW) MPS SITE # 29
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot

6140.15 Appendix 2

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Jacksonville ARTCC (ZJK) MPS SITE # 9				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Windsor Locks AFS (BDL) MPS SITE # 32
NS II .5 Mb Memory Boards		2	С	Windsor Locks AFS (BDL) MPS SITE # 32
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	S	FAA Depot
Albuquerque ARTCC (ZAB) MPS SITE # 10				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	c	Denver AFS (DEN) MPS SITE # 36

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
NS II .5 Mb Memory Boards		2	С	Mike Monroney Aeronautical Center - ASM-150 MPS SITE # 28
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Miami ARTCC (ZMA) MPS SITE # 11 NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot)	1420	1	С	Windsor Locks AFS (BDL) MPS SITE # 32
1 Power Supply and Battery Backup				
NS II .5 Mb Memory Boards		2	S	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

6140.15 Appendix 2

MPS Site/ Equipment	Tandem Product Id	<u>Qty</u>	Resp	Destination
Oakland ARTCC (ZOA) MPS SITE # 12				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Edwards AFB (WJF) MPS SITE # 37
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables)				
Ampex 300 Mb - removable	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Memphis ARTCC (ZME) MPS SITE # 13				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	C	Memphis AFS (MEM) MPS SITE # 30
NS II .5 Mb Memory Boards		2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot

MPS Site/ Equipment	Tandem Product Id	<u>Qty</u>	Resp	<u>Destination</u>
Seattle ARTCC (ZSE) MPS SITE # 14				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Fairbanks AFS (FAI) MPS SITE # 38
NS II .5 Mb Memory Boards Disc Drives (Including	5	2	С	Fairbanks AFS (FAI) MPS SITE # 38
Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Honolulu ARTCC (ZHN) MPS SITE # 15				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Mike Monroney Aeronautical Center, AAC-940 MPS SITE # 27
NS II .5 Mb Memory Boards	, ;	2	S	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot

6140.15 Appendix 2

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	Destination
Disc Controller Board Pairs	3106	2	s	FAA Depot
Salt Lake City ARTCC (ZLC MPS SITE # 16)			
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Wichita AFS (ICT) MPS SITE # 35
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	S	FAA Depot
Denver ARTCC (ZDV) MPS SITE # 17				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	C	Denver AFS (DEN) MPS SITE # 36
NS II .5 Mb Memory Boards	;	2	С	Denver AFS (DEN) MPS SITE # 36

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot
Minneapolis ARTCC (ZMP) MPS SITE # 18 NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Fairbanks AFS (FAI) MPS SITE # 38
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	S	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	s	FAA Depot

MPS Site/ Equipment	Tandem Product Id	<u>Qty</u>	Resp	Destination
Indianapolis ARTCC (ZID) MPS SITE # 19				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Wichita AFS (ICT) MPS SITE # 35
NS II .5 Mb Memory Boards		2	С	Wichita AFS (ICT) MPS SITE # 35
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Cleveland ARTCC (ZOB) MPS SITE # 20				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	c	Detroit AFS (DTW) MPS SITE # 33
NS II .5 Mb Memory Boards		2	s	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	Destination
Washington ARTCC (ZDC) MPS SITE # 21				•
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Norfolk AFS (ORF) MPS SITE # 31
NS II .5 Mb Memory Boards		2	С	Norfolk AFS (ORF) MPS SITE # 31
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
New York ARTCC (ZNY) MPS SITE # 22				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	Memphis AFS (MEM) MPS SITE # 30
NS II .5 Mb Memory Boards	•	2	С	Memphis AFS (MEM) MPS SITE # 30
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Boston ARTCC (ZBW) MPS SITE # 23				
NS II Computer Subsystem 3 Processor Boards 3 0.5 Mb Memory Boards 1 2.0 Mb Memory Board 1 Ribbon Cable (4 Slot) 1 Power Supply and Battery Backup	1420	1	С	St. Louis AFS (STL) MPS SITE # 34
NS II .5 Mb Memory Boards		2	S	FAA Depot
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl	e 4104	2	S	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Patch Panel Cabinet	7105	1	S	FAA Depot
FAA Headquarters, ASM-220 MPS SITE # 24				
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removabl 264 Mb Winchester pair	e 4104 4114/15	4 1	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	2	s	FAA Depot
Disc Controller Board Pairs	3106 3107	2 4	S ·S	FAA Depot FAA Depot

MPS Site/	Tandem Product								
Equipment	<u> Id</u>	<u>Qty</u>	Resp	<u>Destination</u>					
FAA Technical Center, ACT-110 MPS SITE # 25									
Disc Drives (Including Disc Packs and Cables) Ampex 300 Mb - removable	e 4104	2	s	FAA Depot					
Disc Patch Panel	7504	1	s	FAA Depot					
Disc Controller Board Pairs	3106	2	s	FAA Depot					
Tape Controller	3202	1	s	FAA Depot					
FAA Technical Center, ASM-160 MPS SITE # 26									
NS II .5 Mb Memory Boards		4	s	FAA Depot					
Disc Drives (Including Disc Packs and Cables)									
Ampex 300 Mb - removable CDC 80 Mb Cab. Mount	e 4104 4105	2 4	s s	FAA Depot FAA Depot					
Disc Patch Panel	7504	1	s	FAA Depot					
Disc Controller Board Pairs	3106	2	S	FAA Depot					
Mike Monroney Aeronautical Center, AAC-940 MPS SITE # 27									
NS II .5 Mb Memory Boards		2	С	Mike Monroney Aeronautical Center - ASM-150 MPS SITE # 28					
NS II .5 Mb Memory Boards		1	s	FAA Depot					

6140.15 Appendix 2

MPS Site/	Tandem Product			
<u>Equipment</u>	<u> Id</u>	<u>Qty</u>	Resp	<u>Destination</u>
NS II .5 Mb Memory Boards		1	s	FAA Depot (at a later date)
NS II 2.0 Mb Memory Board		1	s	FAA Depot (at a later date)
Disc Drives (Including Disc Packs and Cables)				
Ampex 300 Mb - removabl	e 4104	4	S	(To be decided at a later date)
Disc Patch Panel	7504	1	S	(To be decided at a later date)
Disc Controller Board Pairs	3106	2	S	(To be decided at a later date)
Mike Monroney Aeronautical Center, ASM-150 MPS SITE # 28				
Disc Drives 264 Mb Winchester Pair	4114/15	2	s	FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Dallas/Ft. Worth AFS (DFW MPS SITE # 29				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair	4110/11 4114/15	1	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Memphis AFS (MEM) MPS SITE # 30				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair	4110/11 4114/15	1	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Norfolk AFS (ORF) MPS SITE # 31				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair	4110/11 4114/15	1	S S	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Windsor Locks AFS (BDL) MPS SITE # 32				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair	4110/11 4114/15	1	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

6140.15 Appendix 2

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Detroit AFS (DTW) MPS SITE # 33				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair		1	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
St. Louis AFS (STL) MPS SITE # 34				
NS II .5 Mb Memory Boards		6	s	FAA Depot
Disc Drives 128 Mb Winchester Pair CDC 80 Mb Winchester	4110/11 4109	2 2	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106 3106A		s s	FAA Depot FAA Depot
Wichita AFS (ICT) MPS SITE # 35				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair	4110/11 4114/15	1	s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

MPS Site/ Equipment	Tandem Product Id	Qty	Resp	<u>Destination</u>
Denver AFS (DEN) MPS SITE # 36				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair CDC 80 Mb Drawer Mount	4110/11 4114/15 4106		s s s	FAA Depot FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	S	FAA Depot
Edwards AFB (WJF) MPS SITE # 37				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair			s s	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot
Fairbanks AFS (FAI) MPS SITE # 38				
Disc Drives 128 Mb Winchester Pair 264 Mb Winchester Pair			S S	FAA Depot FAA Depot
Disc Patch Panel	7504	1	s	FAA Depot
Disc Controller Board Pairs	3106	2	s	FAA Depot

APPENDIX 3. MPS FLOOR LAYOUT BEFORE AND AFTER MPS ENHANCEMENT

This appendix contains the floor layout for each MPS site before and after the MPS enhancement. Each "before" floor layout reflects information gathered during MPS site surveys conducted by ACT-110 from November through December 1987.

FIGURE 1-1. KANSAS CITY MPS SITE # 1 - BEFORE ENHANCEMENT

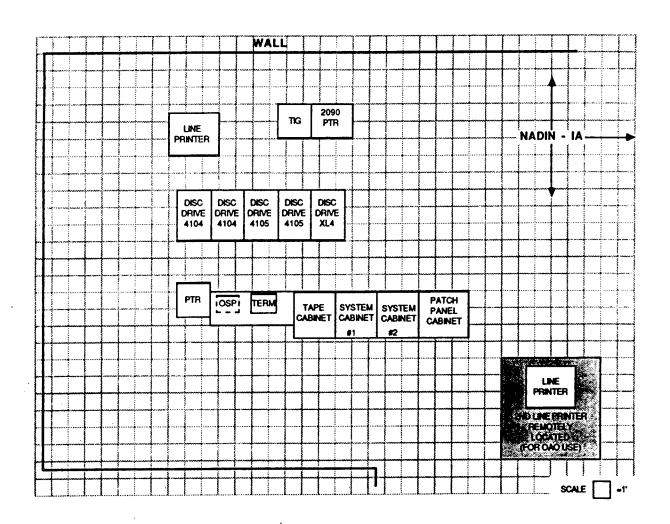


FIGURE 1-2. KANSAS CITY MPS SITE # 1 - AFTER ENHANCEMENT

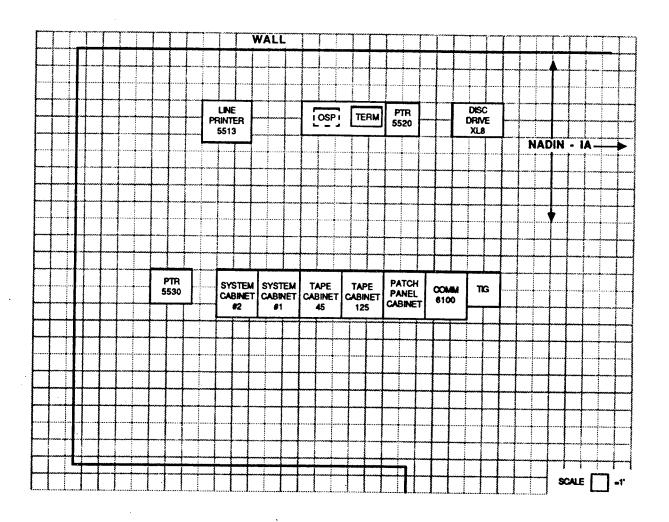


FIGURE 2-1. LOS ANGELES MPS SITE # 2 - BEFORE ENHANCEMENT

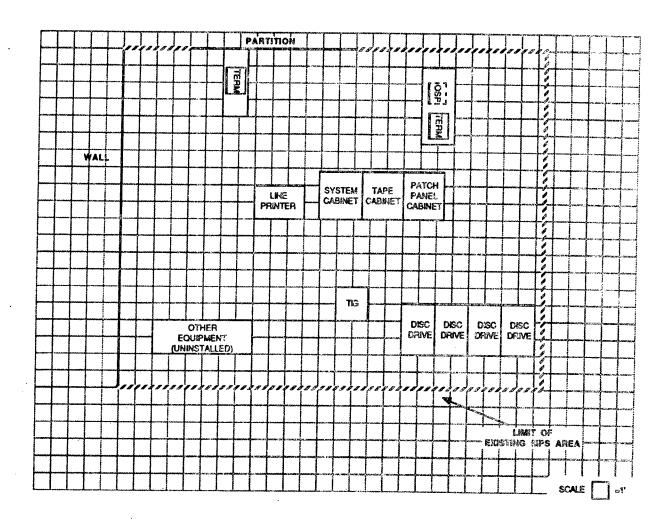


FIGURE 2-2. LOS ANGELES MPS SITE # 2 - AFTER ENHANCEMENT

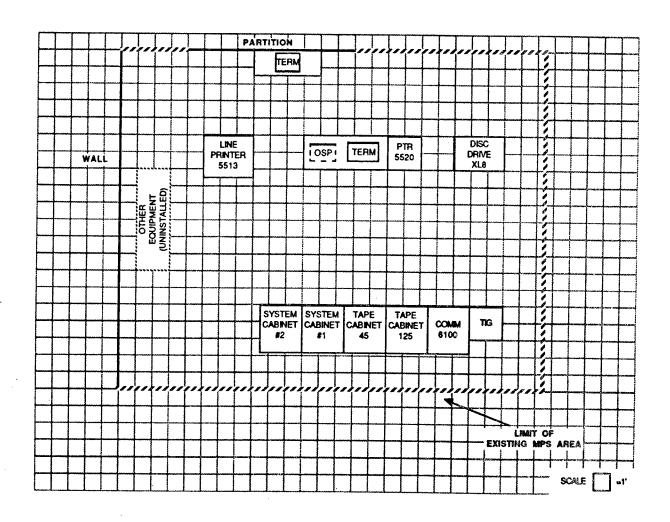


FIGURE 3-1. AMCHORAGE MAS SITE # 3 - BEFORE ENHANCEMENT

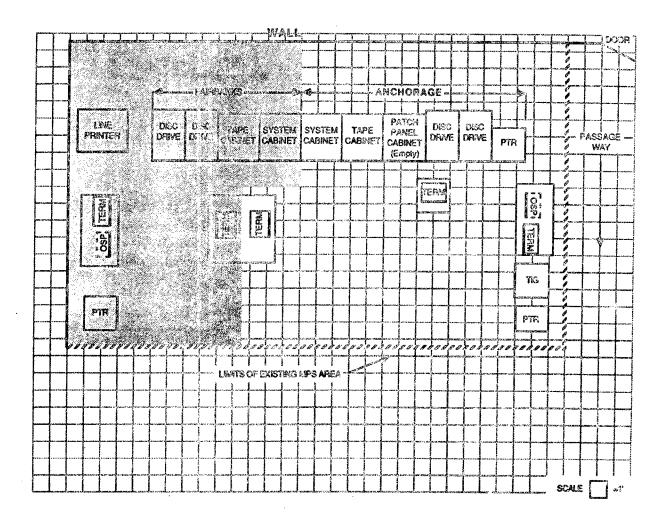


FIGURE 3-2. ANCHORAGE MPS SITE # 3 - AFTER ENHANCEMENT

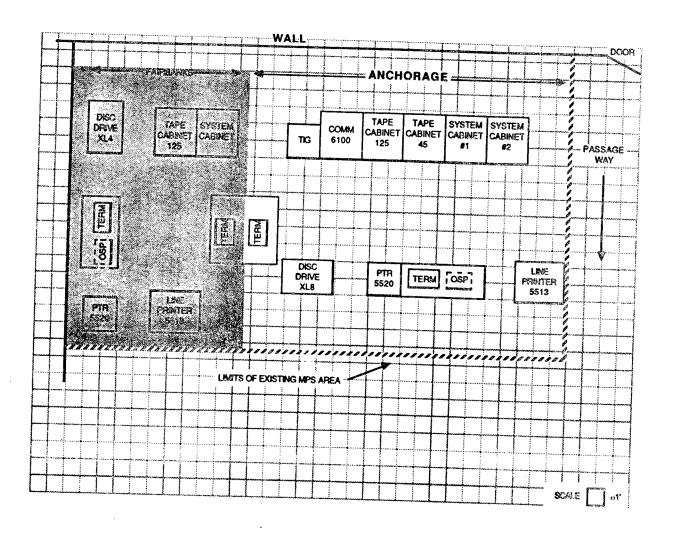


FIGURE 4-1. CHICAGO MPS SITE # 4 - BEFORE ENHANCEMENT

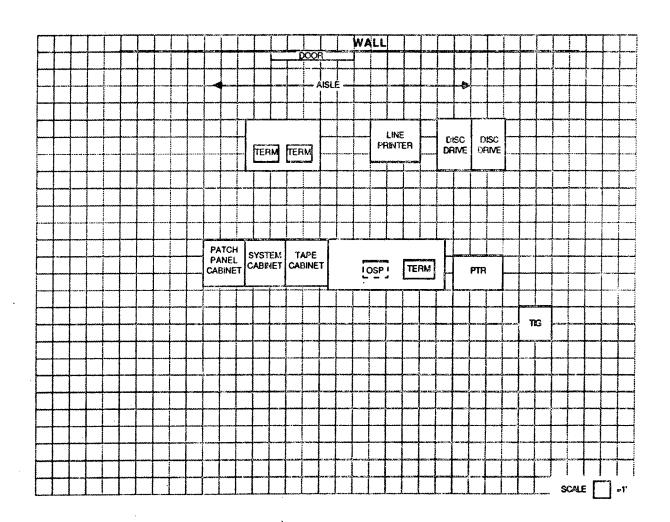


FIGURE 4-2. CHICAGO MPS SITE # 4 - AFTER ENHANCEMENT

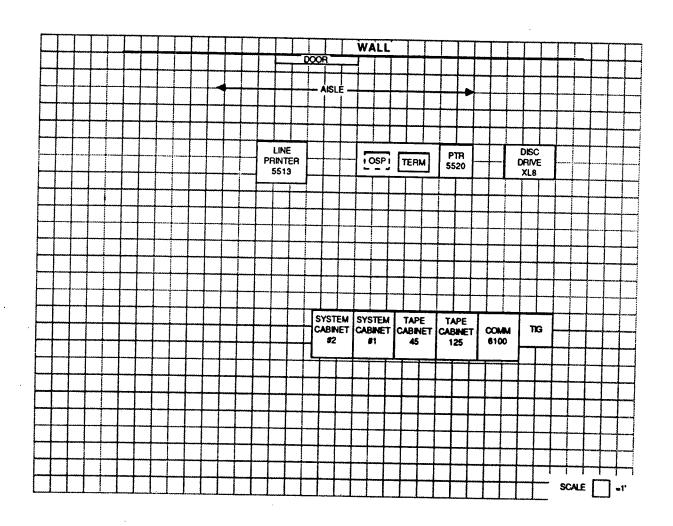


FIGURE 5-1. ATLANTA MPS SITE # 5 - BEFORE ENHANCEMENT

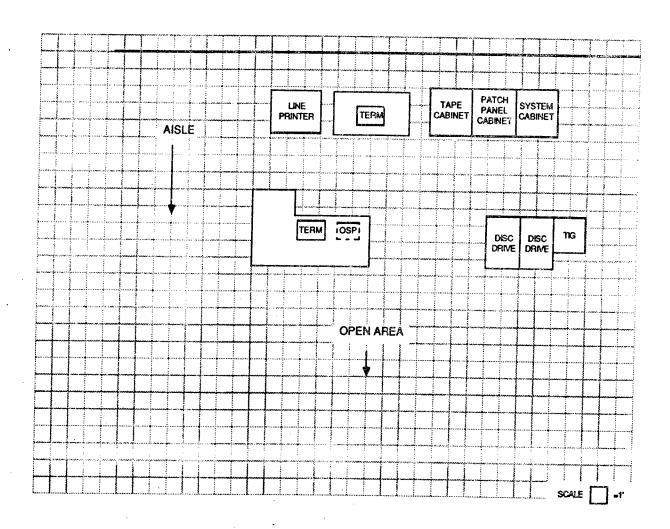


FIGURE 5-2. ATLANTA MPS SITE # 5 - AFTER ENHANCEMENT

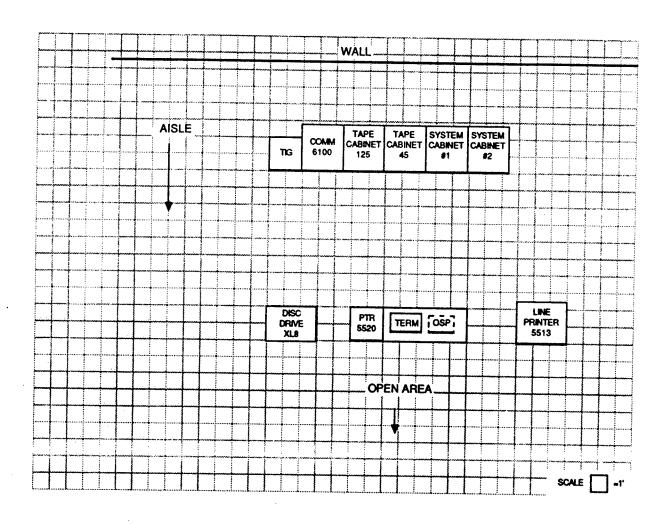


FIGURE 6-1. FT. WORTH MPS SITE # 6 - BEFORE ENHANCEMENT

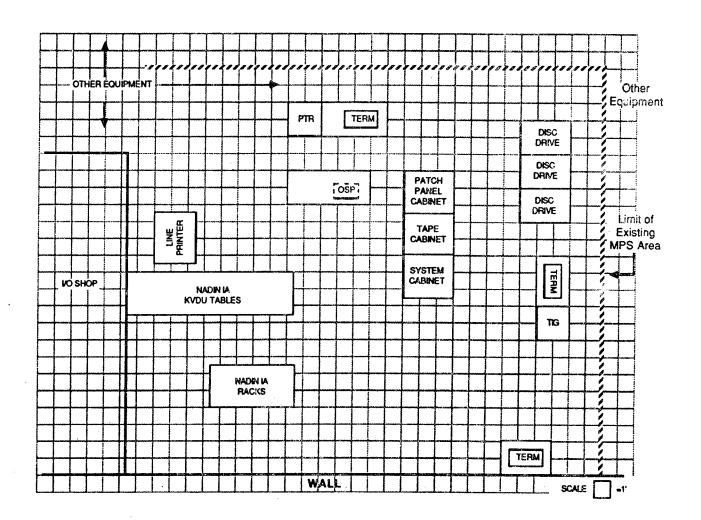


FIGURE 6-2. FT. WORTH MPS SITE # 6 - AFTER ENHANCEMENT

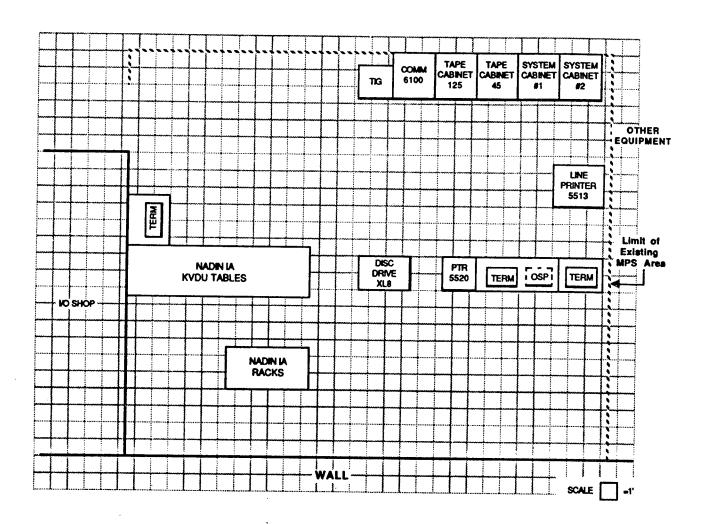


FIGURE 7-1. SAN JUAN MPS SITE # 7 - BEFORE ENHANCEMENT

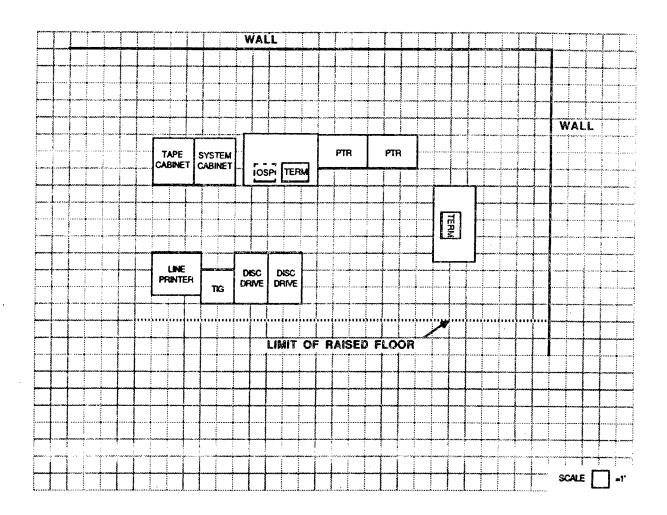


FIGURE 7-2. SAN JUAN MPS SITE # 7 - AFTER ENHANCEMENT

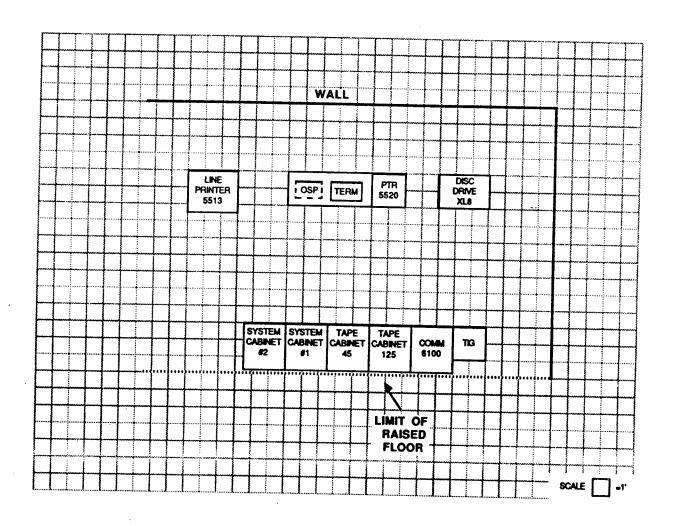


FIGURE 8-1. HOUSTON MPS SITE # 8 - BEFORE ENHANCEMENT

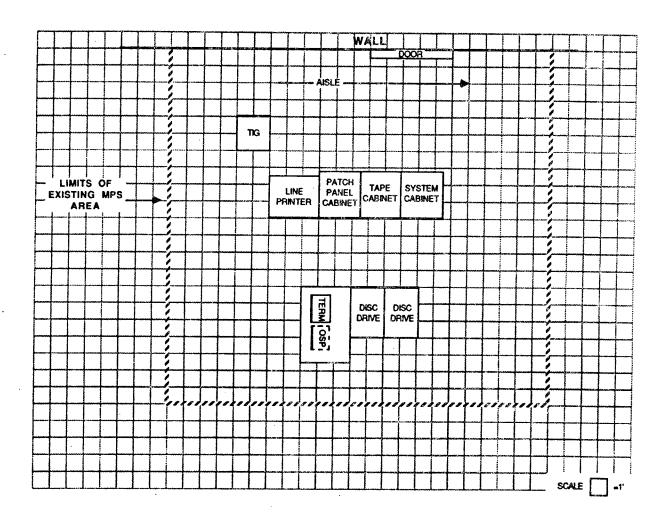


FIGURE 8-2. HOUSTON MPS SITE # 8 - AFTER ENHANCEMENT

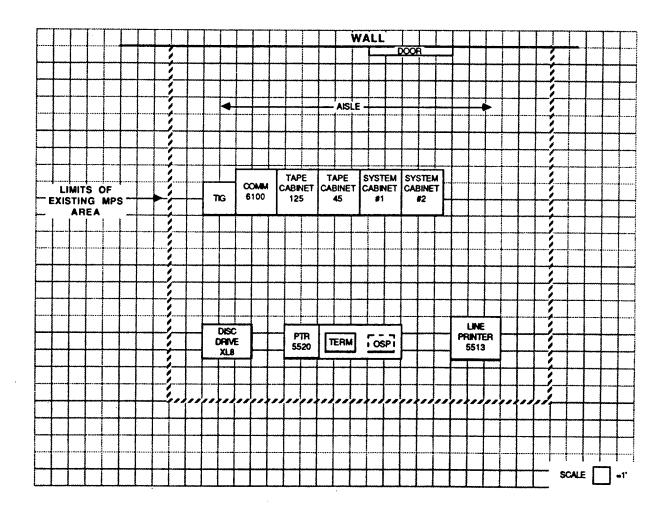


FIGURE 9-1. JACKSONVILLE MPS SITE # 9 - BEFORE ENHANCEMENT

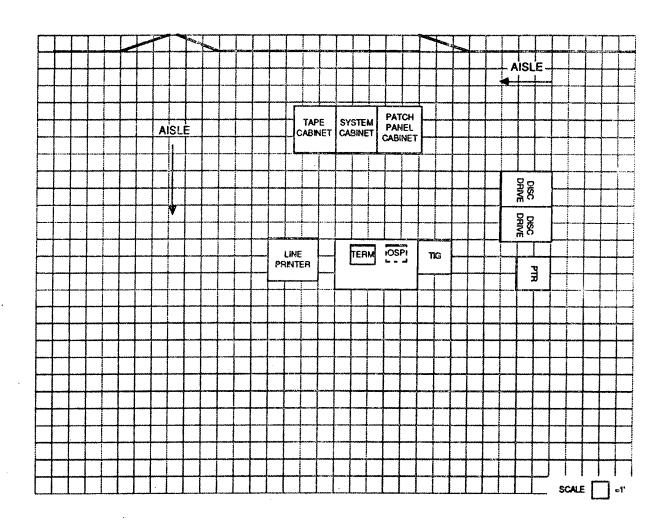


FIGURE 9-2. JACKSONVILLE MPS SITE # 9 - AFTER ENHANCEMENT

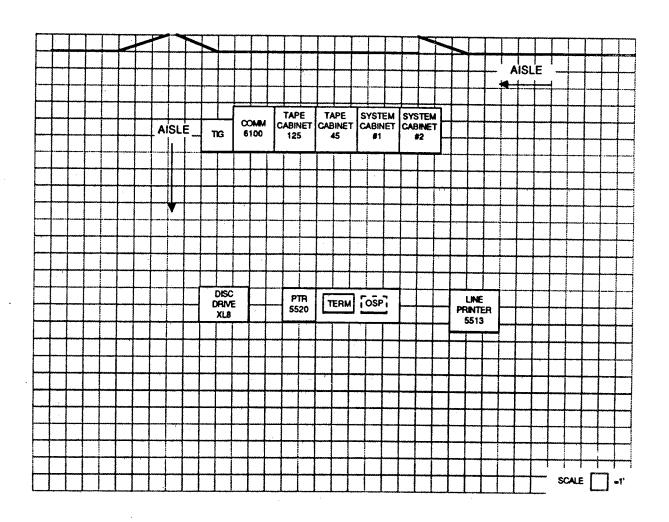


FIGURE 10-1. ALBUQUERQUE MPS SITE # 10 - BEFORE ENHANCEMENT

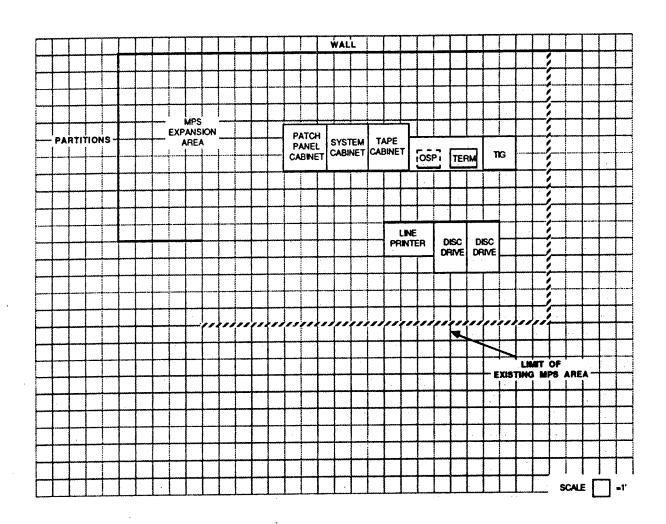


FIGURE 10-2. ALBUQUERQUE MPS SITE # 10 - AFTER ENHANCEMENT

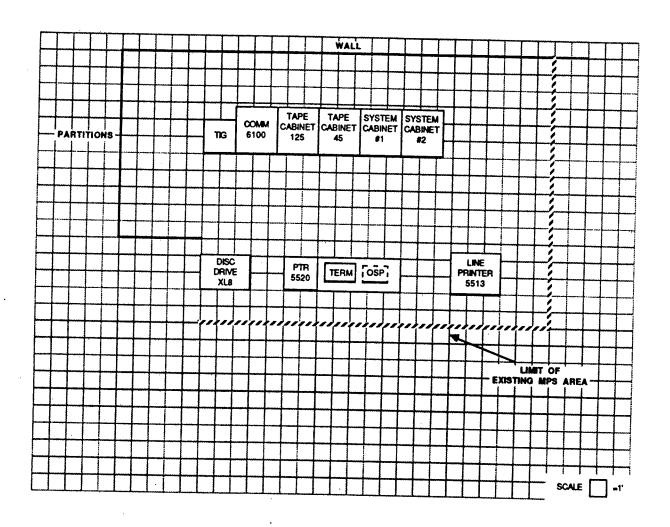


FIGURE 11-1. MIAMI MPS SITE # 11 - BEFORE ENHANCEMENT

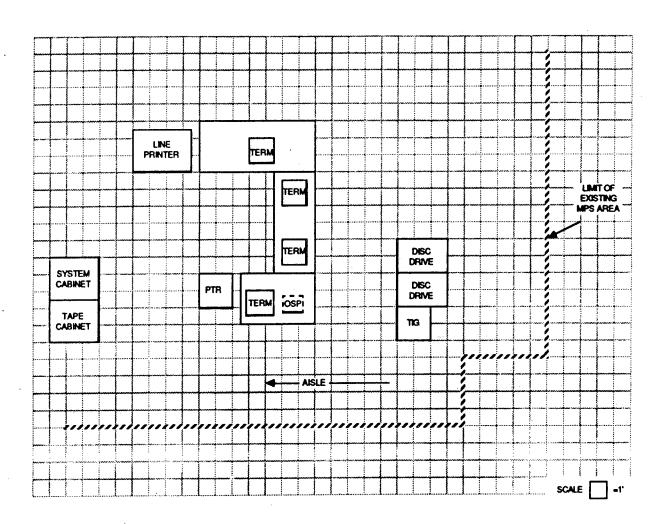


FIGURE 11-2. MIAMI MPS SITE # 11 - AFTER ENHANCEMENT

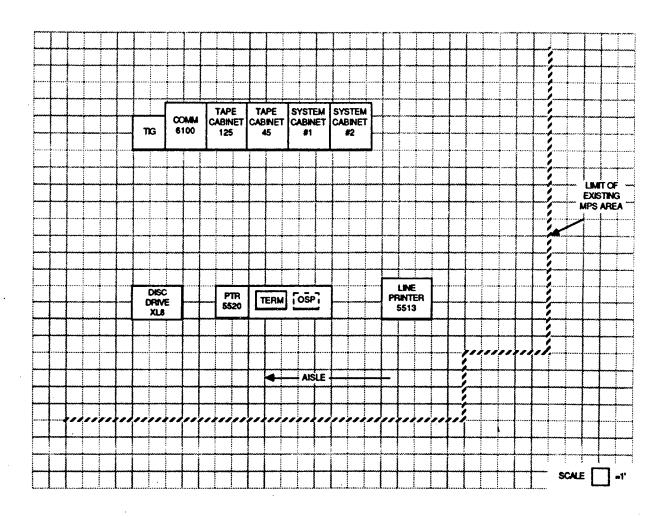


FIGURE 12-1. OAKLAND MPS SITE # 12 - BEFORE ENHANCEMENT

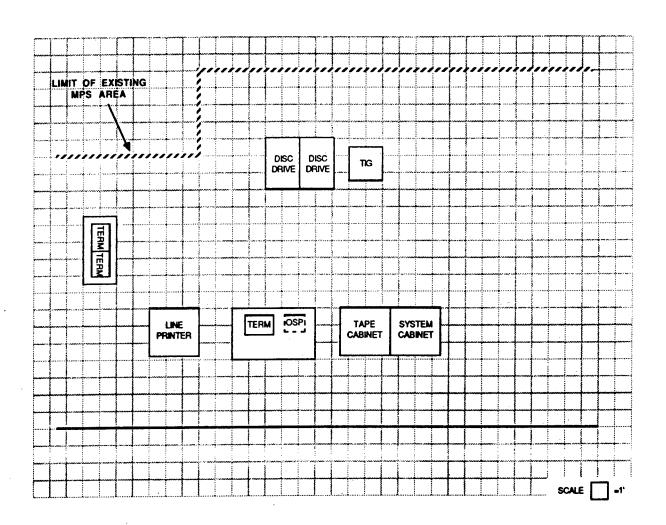


FIGURE 12-2. OAKLAND MPS SITE # 12 - AFTER ENHANCEMENT

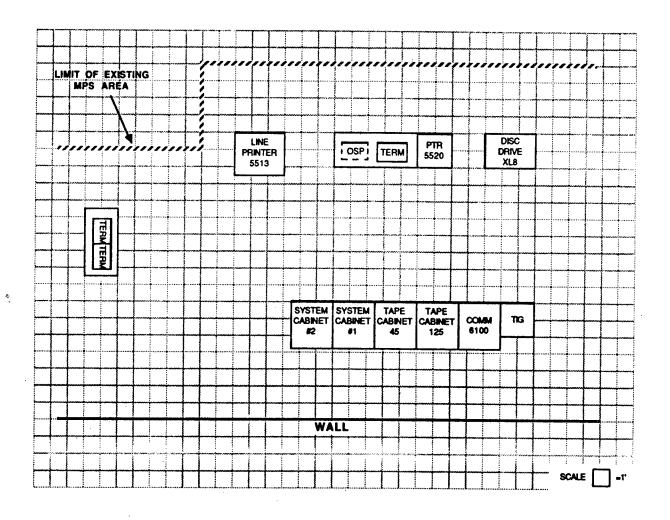


FIGURE 13-1. MEMPHIS MPS SITE # 13 - BEFORE ENHANCEMENT

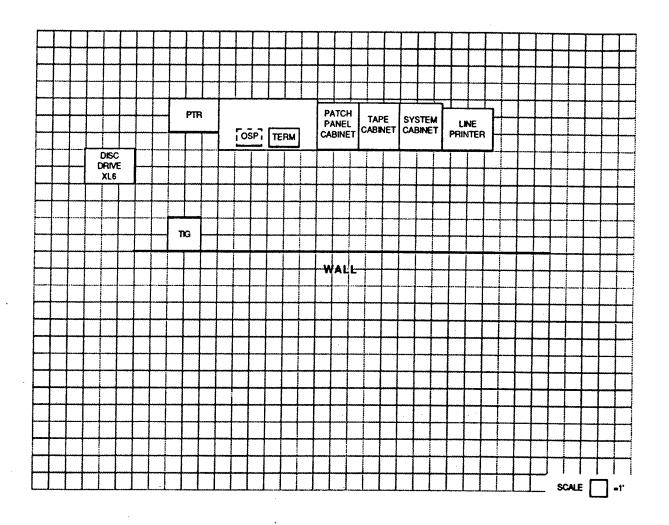


FIGURE 13-2. MEMPHIS MPS SITE # 13 - AFTER ENHANCEMENT

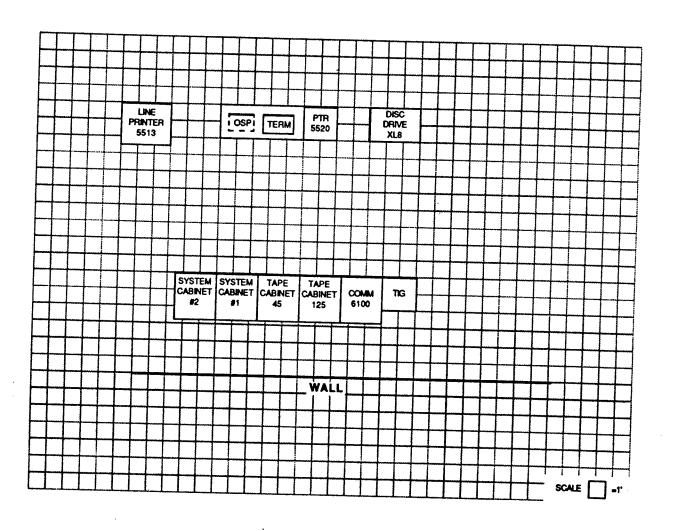


FIGURE 14-1. SEATTLE MPS SITE # 14 - BEFORE ENHANCEMENT

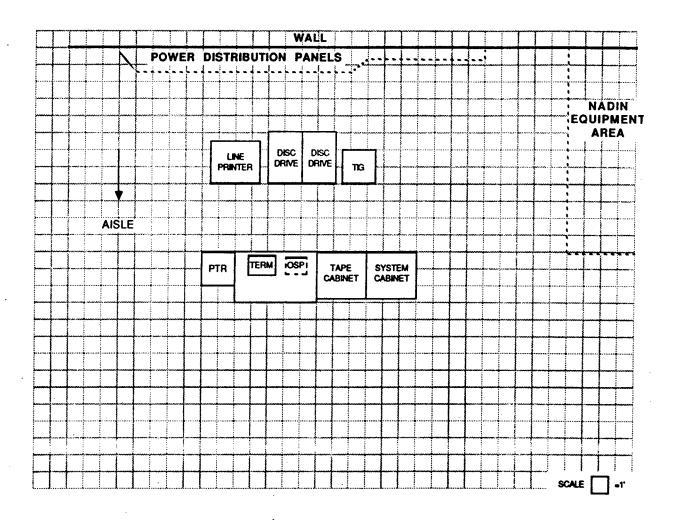


FIGURE 14-2. SEATTLE MPS SITE # 14 - AFTER ENHANCEMENT

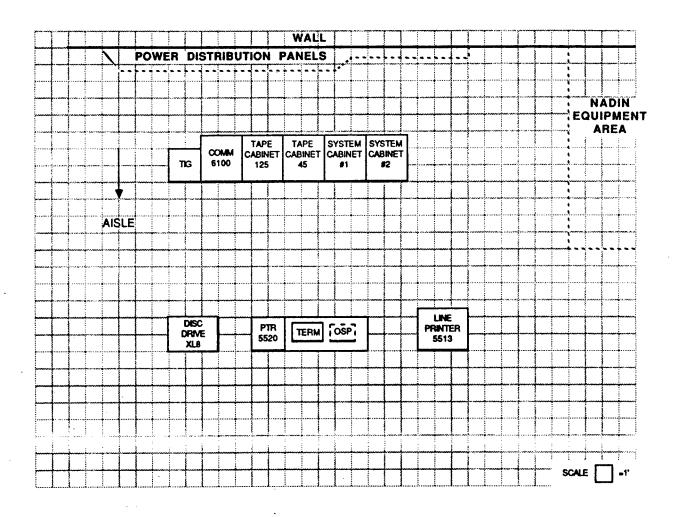


FIGURE 15-1. HONOLULU MPS SITE # 15 - BEFORE ENHANCEMENT

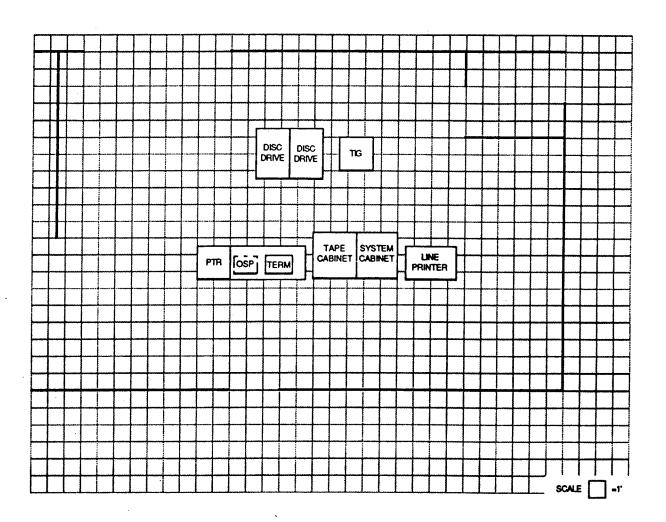


FIGURE 15-2. HONOLULU MPS SITE # 15 - AFTER ENHANCEMENT

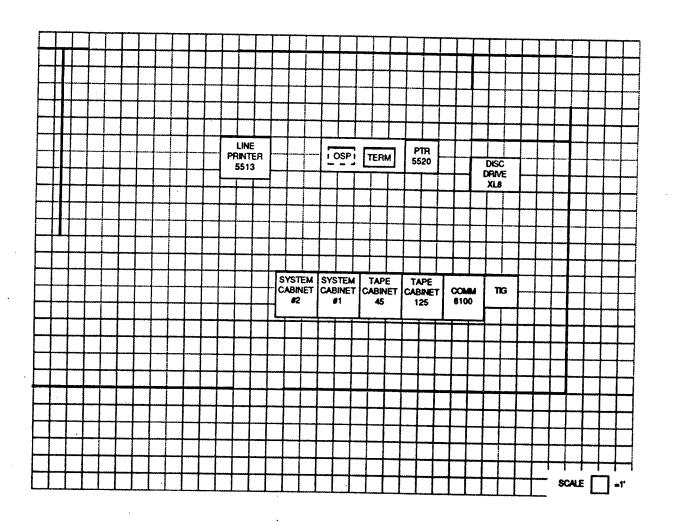


FIGURE 16-1. SALT LAKE CITY MPS SITE # 16 -BEFORE ENHANCEMENT

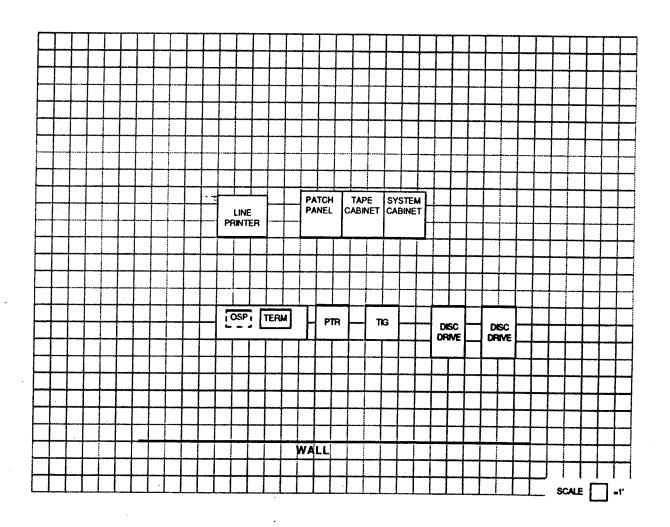


FIGURE 16-2. SALT LAKE CITY MPS SITE # 16 - AFTER ENHANCEMENT

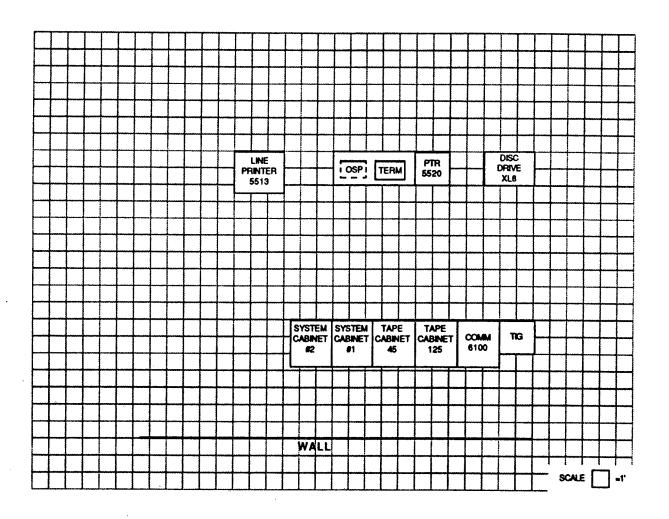


FIGURE 17-1. DENVER MPS SITE # 17 - BEFORE ENHANCEMENT

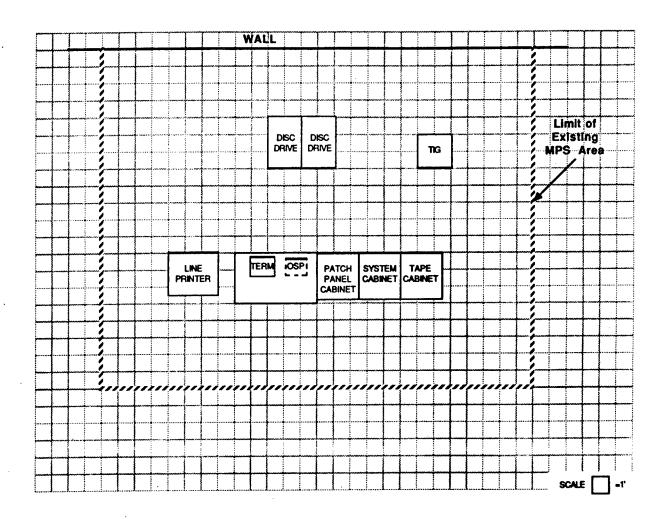


FIGURE 17-2. DENVER MPS SITE # 17 - AFTER ENHANCEMENT

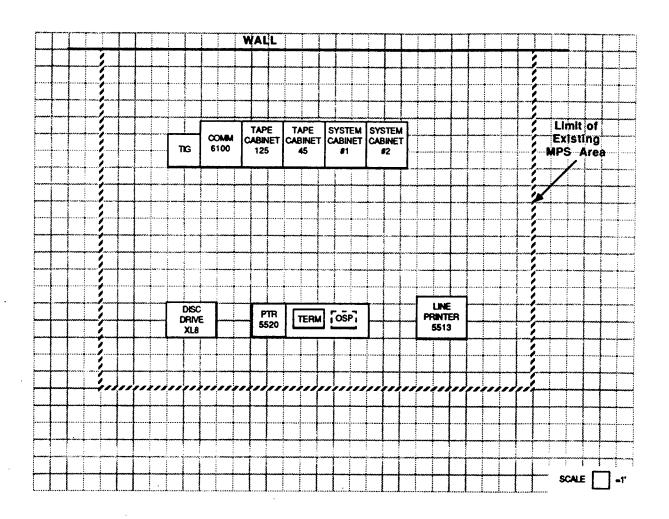


FIGURE 18-1. MINNEAPOLIS MPS SITE # 18 - BEFORE ENHANCEMENT

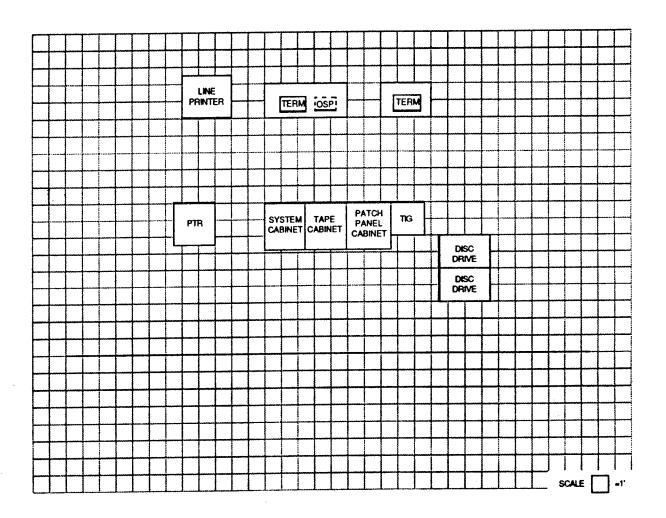


FIGURE 18-2. MINNEAPOLIS MPS SITE # 18 - AFTER ENHANCEMENT

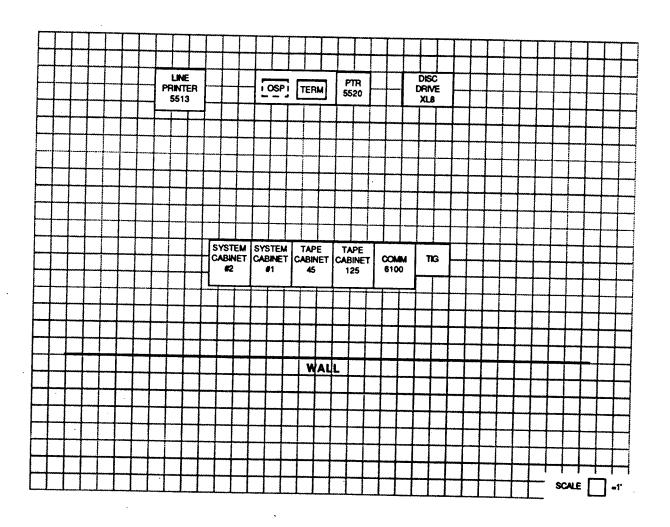


FIGURE 19-1. INDIANAPOLIS MPS SITE # 19 - BEFORE ENHANCEMENT

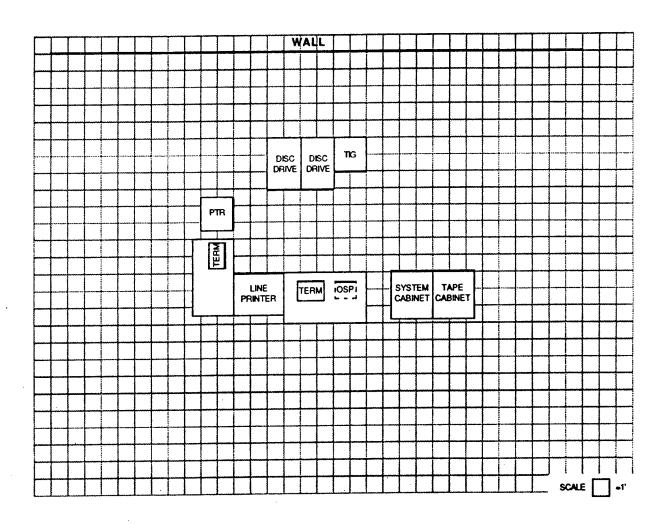


FIGURE 19-2. INDIANAPOLIS MPS SITE # 19 - AFTER ENHANCEMENT

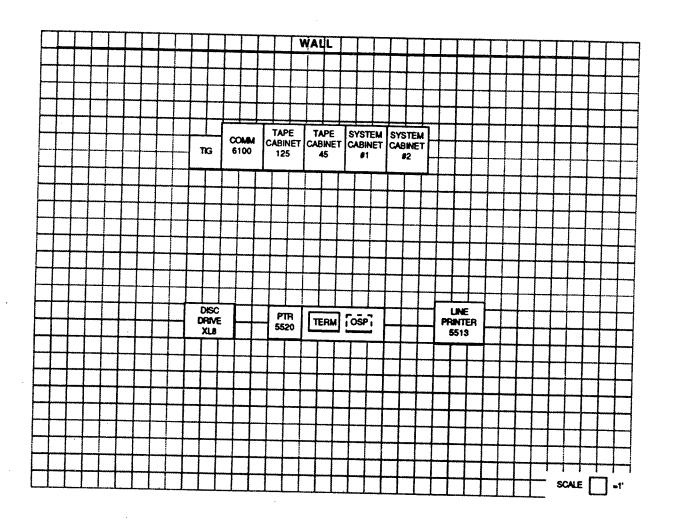


FIGURE 20-1. CLEVELAND MPS SITE # 20 - BEFORE ENHANCEMENT

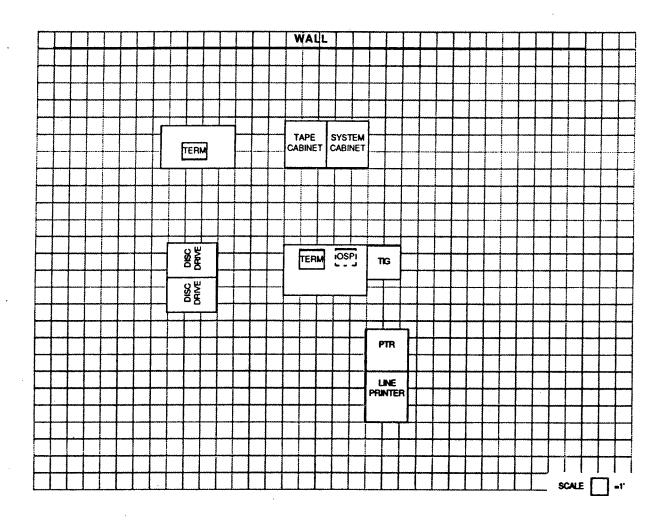


FIGURE 20-2. CLEVELAND MPS SITE # 20 - AFTER ENHANCEMENT

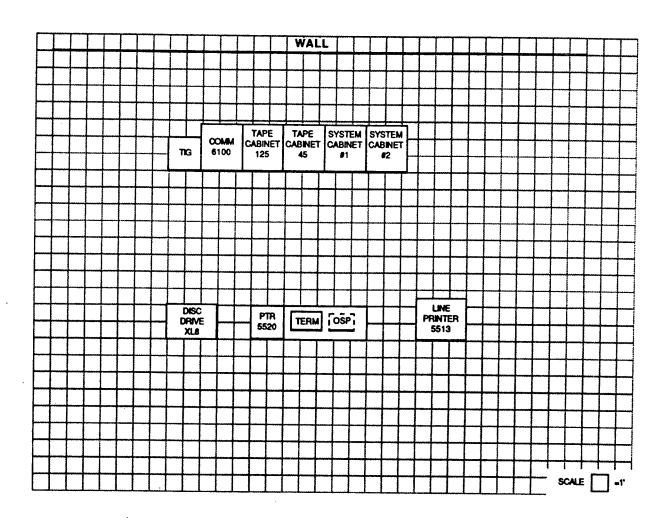


FIGURE 21-1. WASHINGTON (LEESBURG) MPS SITE # 21 - BEFORE ENHANCEMENT

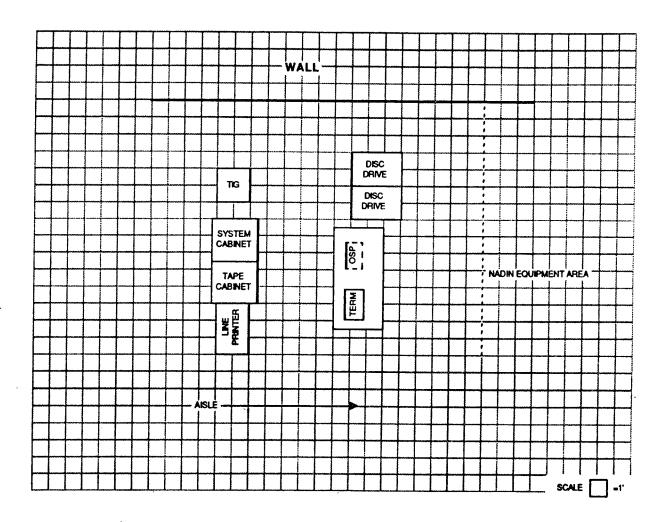


FIGURE 21-2. WASHINGTON (LEESBURG) MPS SITE # 21 - AFTER ENHANCEMENT

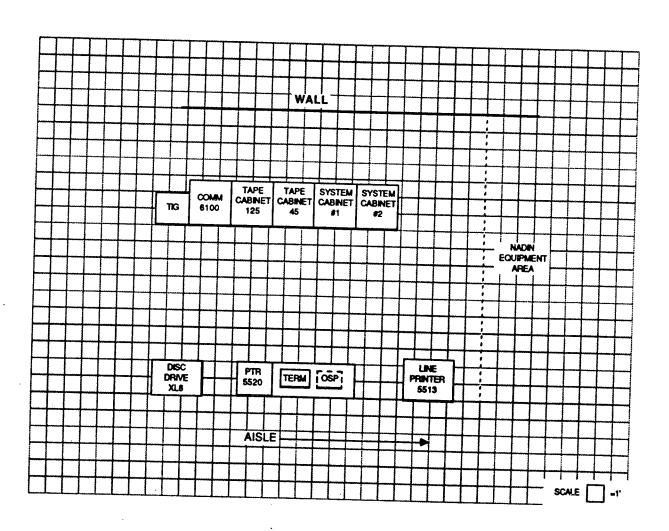


FIGURE 22-1. NEW YORK MPS SITE # 22 - BEFORE ENHANCEMENT

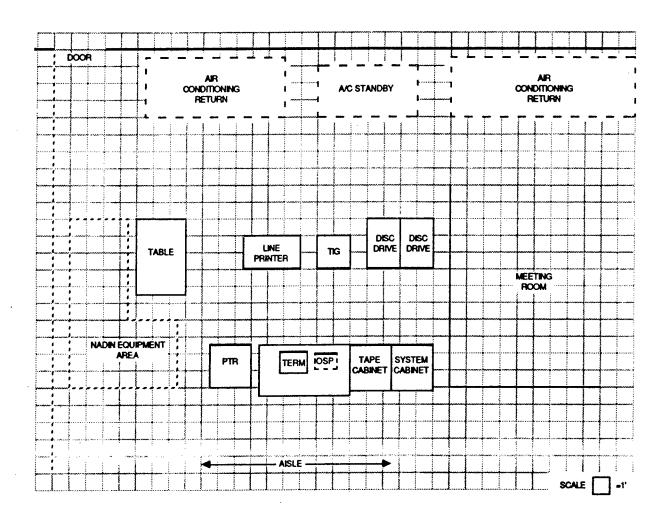


FIGURE 22-2. NEW YORK MPS SITE # 22 - AFTER ENHANCEMENT

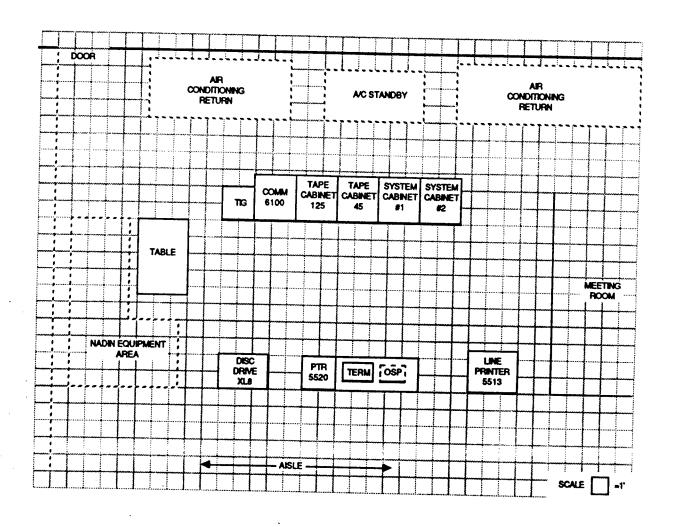


FIGURE 23-1. BOSTON MPS SITE # 23 - BEFORE ENHANCEMENT

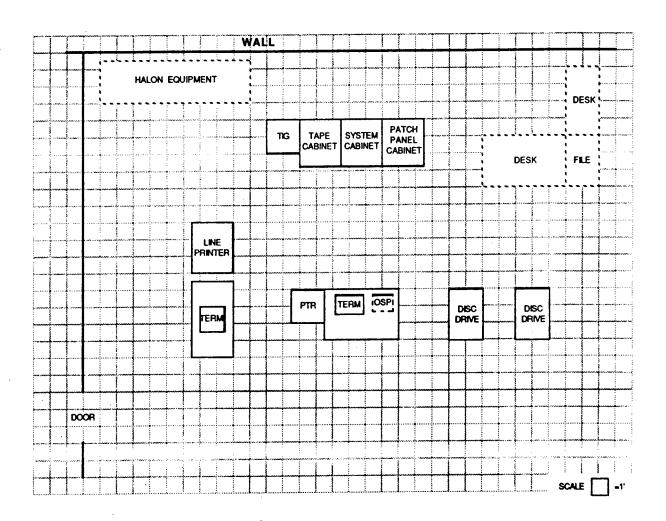


FIGURE 23-2. BOSTON MPS SITE # 23 - AFTER ENHANCEMENT

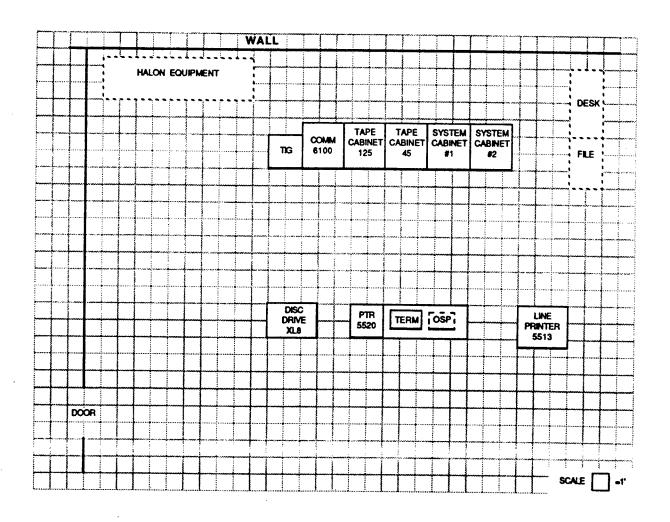


FIGURE 24-1. FAA HEADQUARTERS MPS SITE # 24 - BEFORE ENHANCEMENT

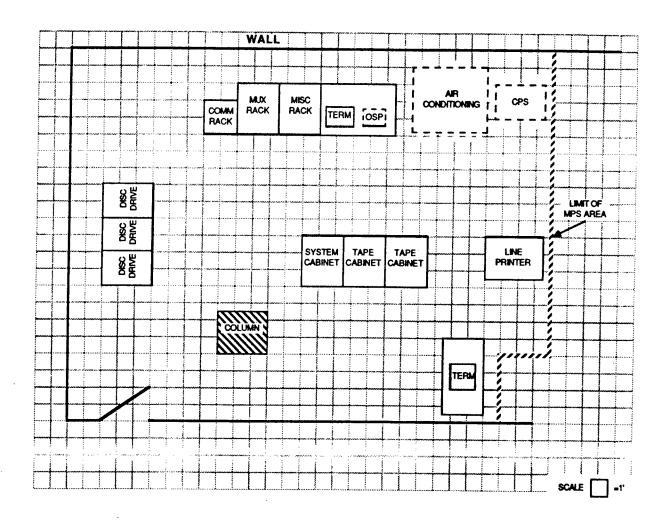


FIGURE 24-2. FAA HEADQUARTERS MPS SITE # 24 - AFTER ENHANCEMENT

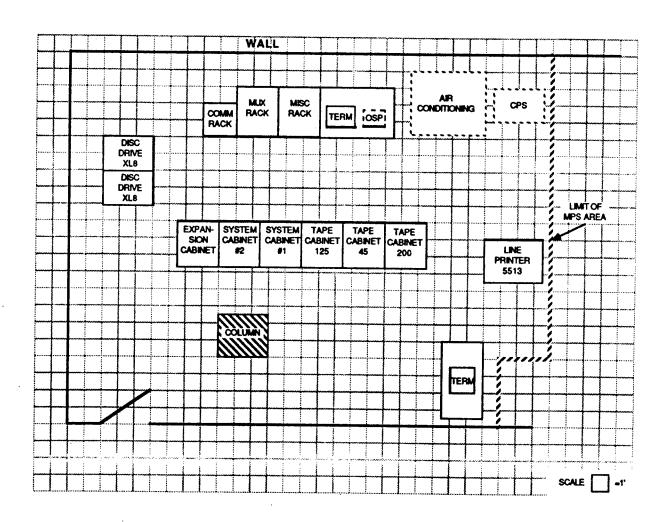


FIGURE 25-1. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 - BEFORE ENHANCEMENT

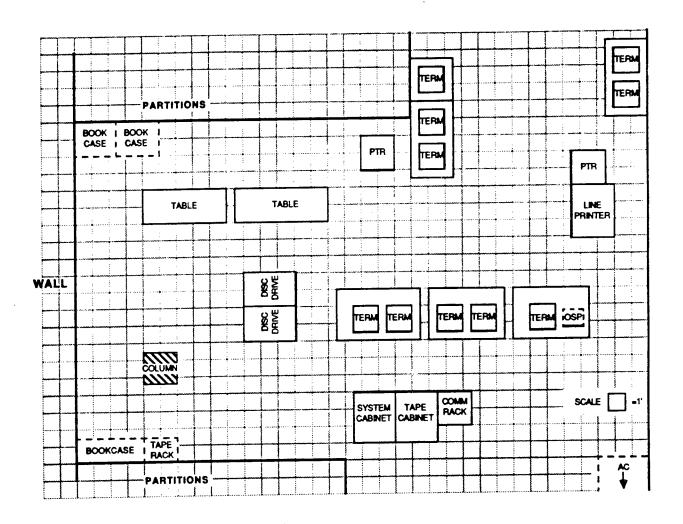
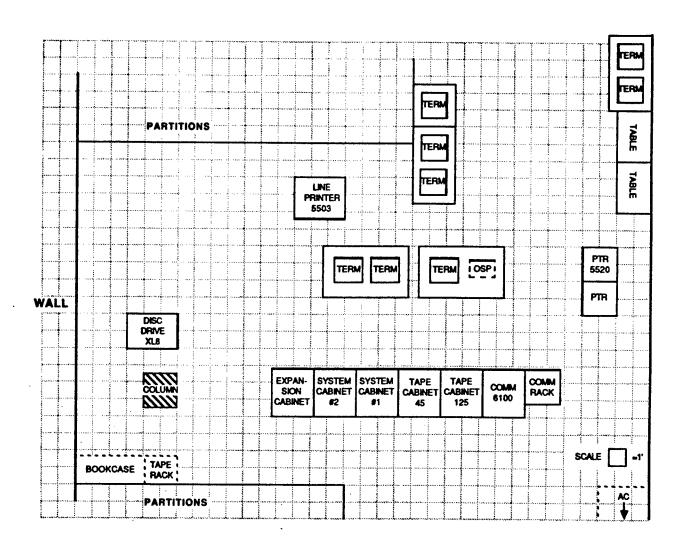


FIGURE 25-2. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 (DELIVERY 1) - AFTER ENHANCEMENT



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FIGURE 25-3. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25

(DELIVERY 2) - AFTER ENHANCEMENT

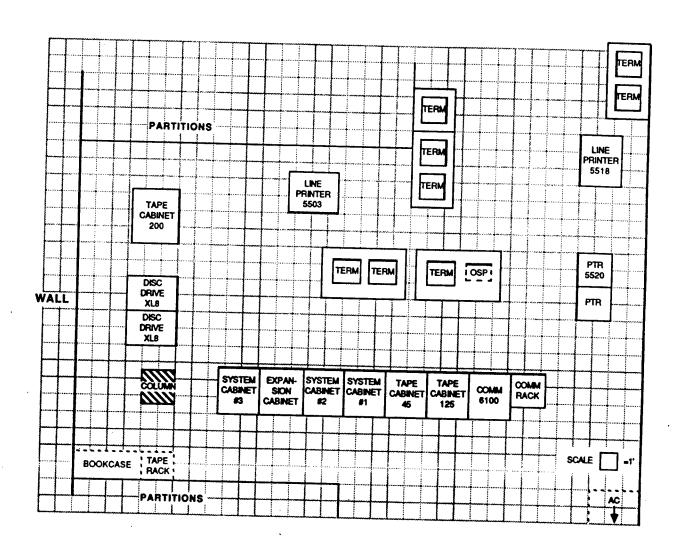


FIGURE 26-1. FAA TECHNICAL CENTER (ASM-160) MPS SITE # 26 - BEFORE ENHANCEMENT

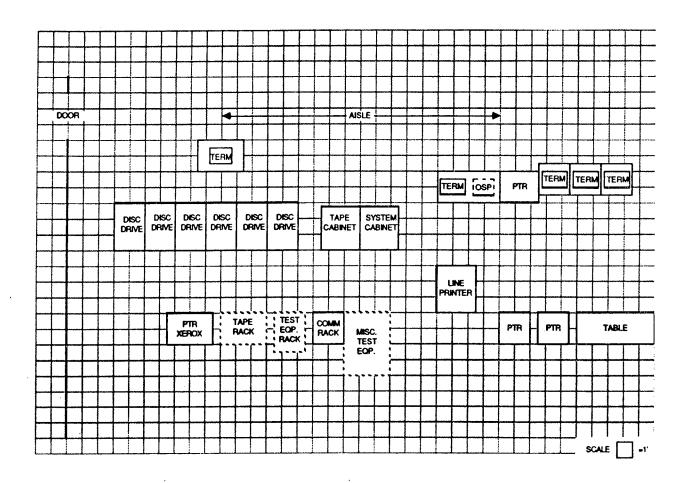


FIGURE 26-2. FAA TECHNICAL CENTER (ASM-160) MPS SITE # 26 - AFTER ENHANCEMENT

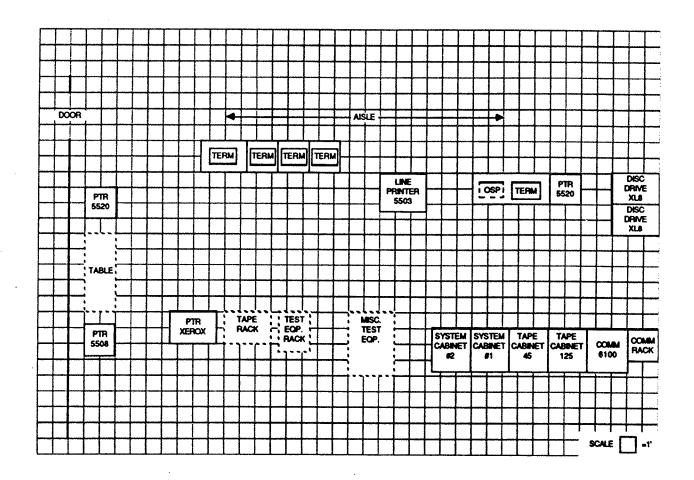


FIGURE 27-1. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940) MPS SITE # 27 - BEFORE ENHANCEMENT

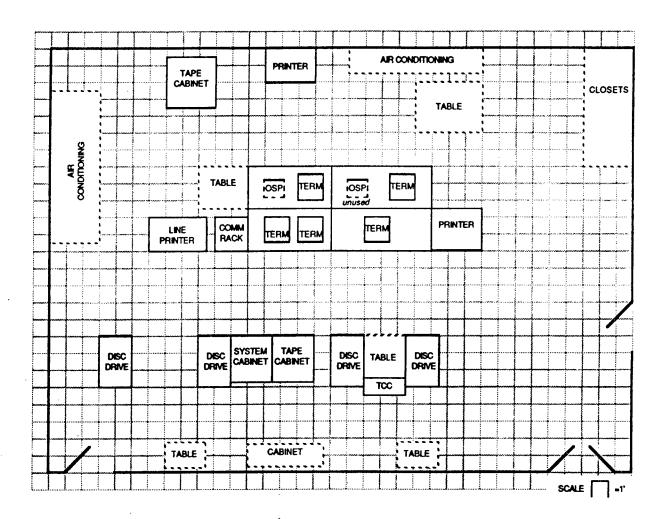


FIGURE 27-2. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940)

MPS SITE # 27 - AFTER ENHANCEMENT

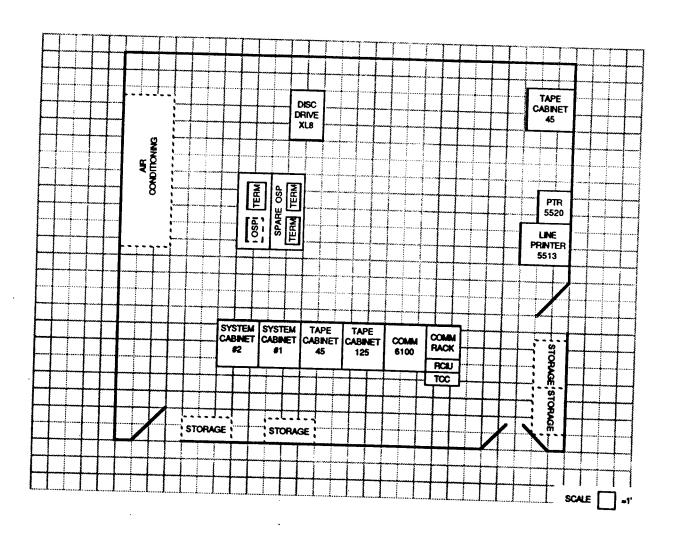


FIGURE 28-1. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 - BEFORE ENHANCEMENT

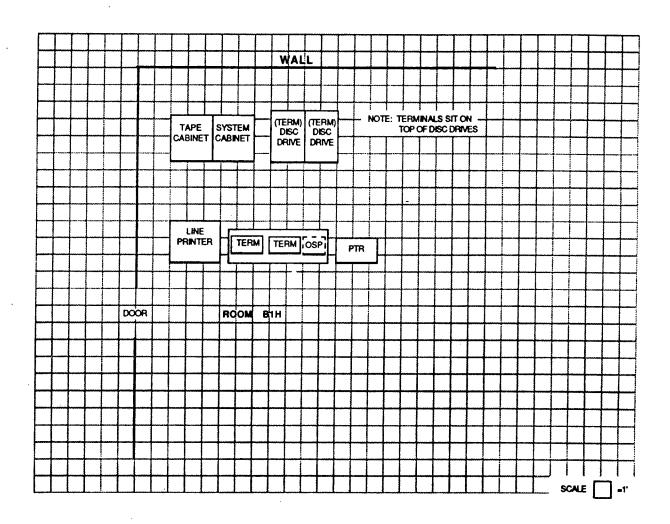


FIGURE 28-2. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 - AFTER ENHANCEMENT

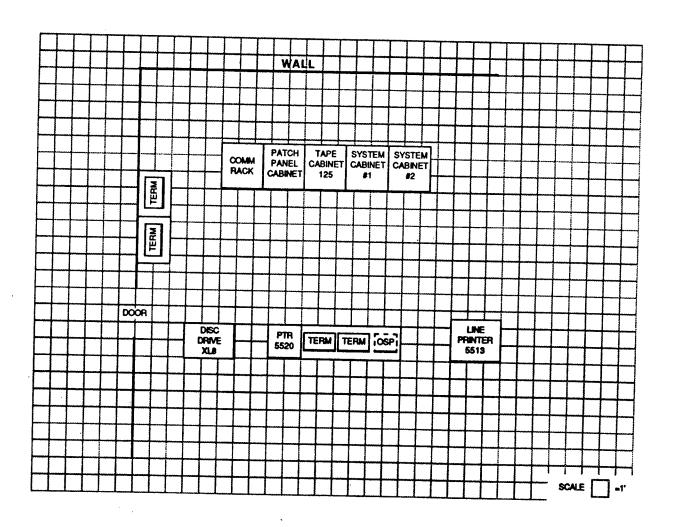


FIGURE 29-1. DALLAS/FT. WORTH MPS SITE # 29
BEFORE ENHANCEMENT

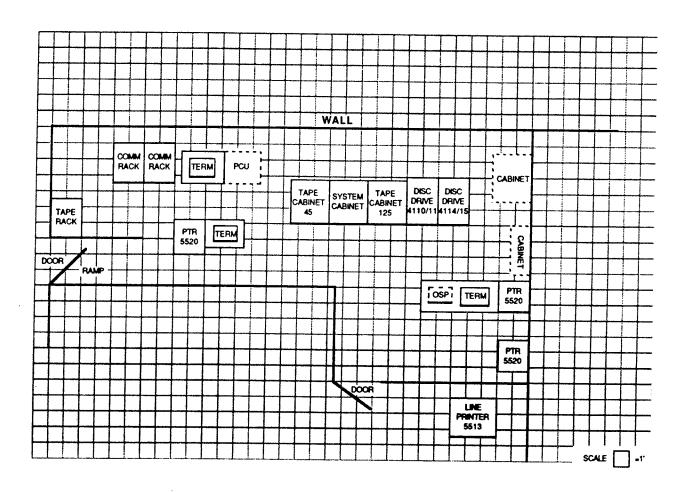


FIGURE 29-2. DALLAS/FT. WORTH MPS SITE # 29
AFTER ENHANCEMENT

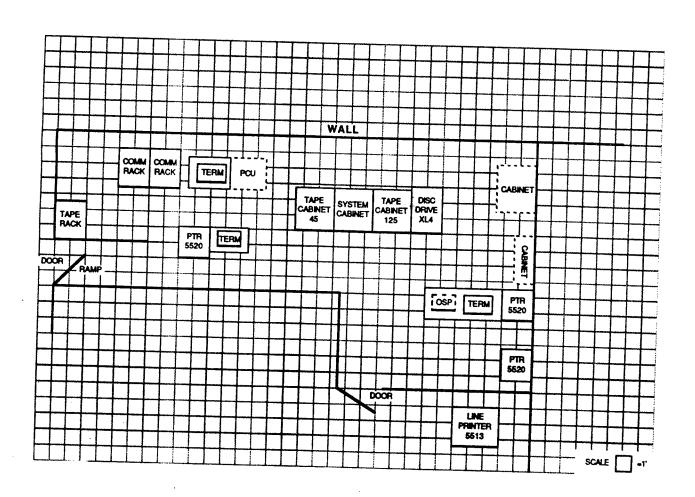


FIGURE 30-1. MEMPHIS MPS SITE # 30 - BEFORE ENHANCEMENT

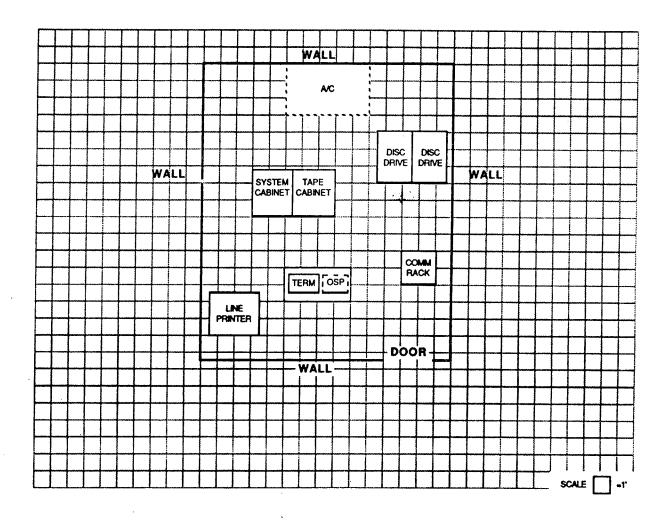


FIGURE 30-2. MEMPHIS MPS SITE # 30 - AFTER ENHANCEMENT

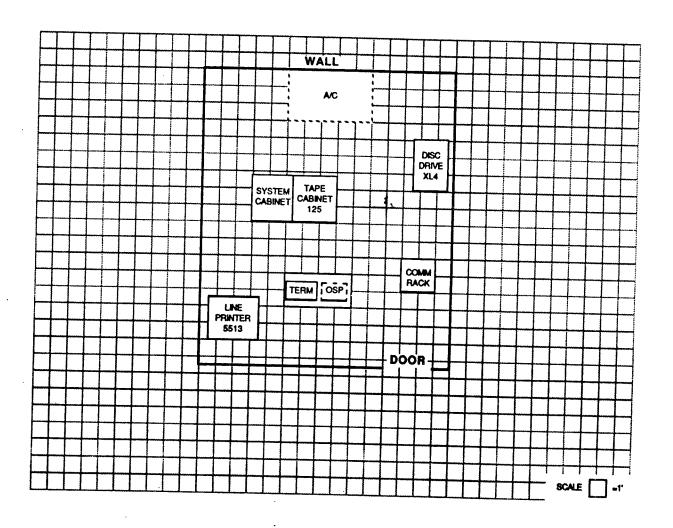


FIGURE 31-1. NORFOLK MPS SITE # 31 - BEFORE ENHANCEMENT

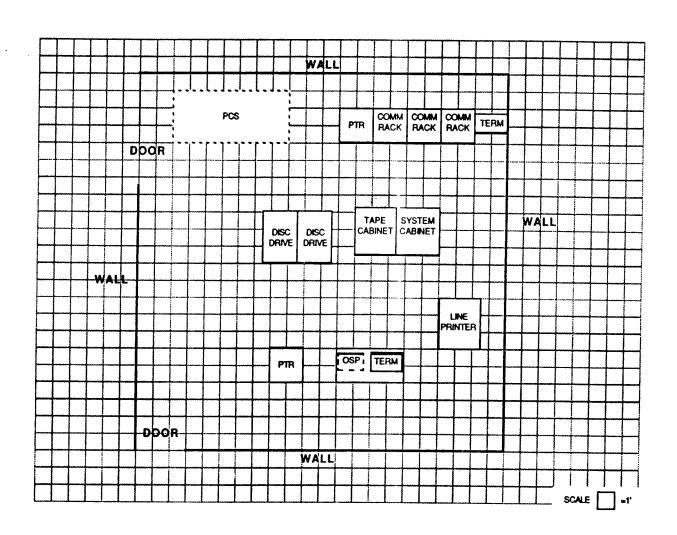


FIGURE 31-2. NORFOLK MPS SITE # 31 - AFTER ENHANCEMENT

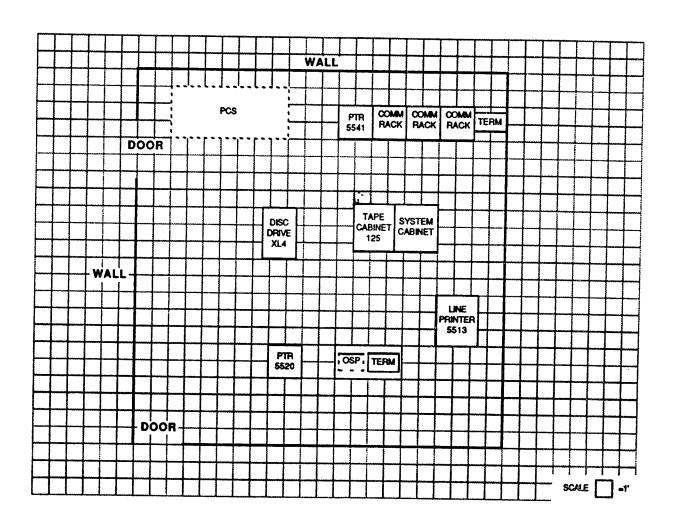


FIGURE 32-1. WINDSOR LOCKS MPS SITE # 32 -BEFORE ENHANCEMENT

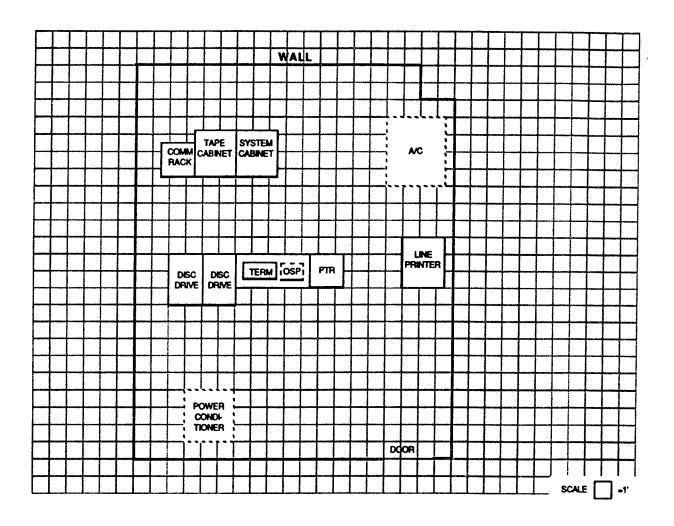


FIGURE 32-2. WINDSOR LOCKS MPS SITE # 32 AFTER ENHANCEMENT

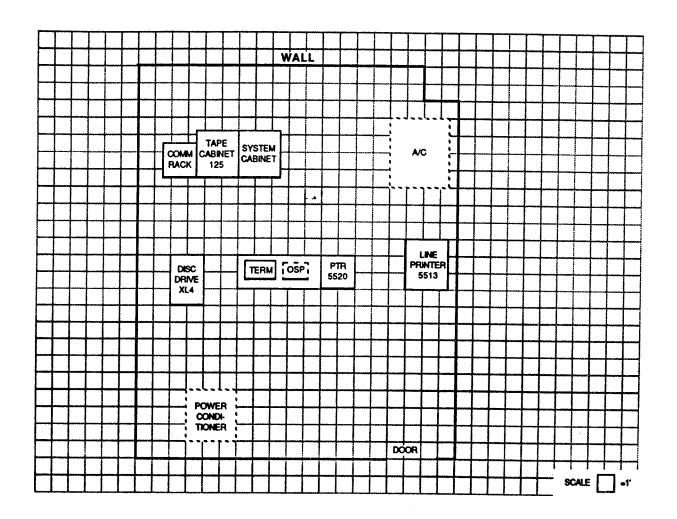


FIGURE 33-1. DETROIT MPS SITE # 33 - BEFORE ENHANCEMENT

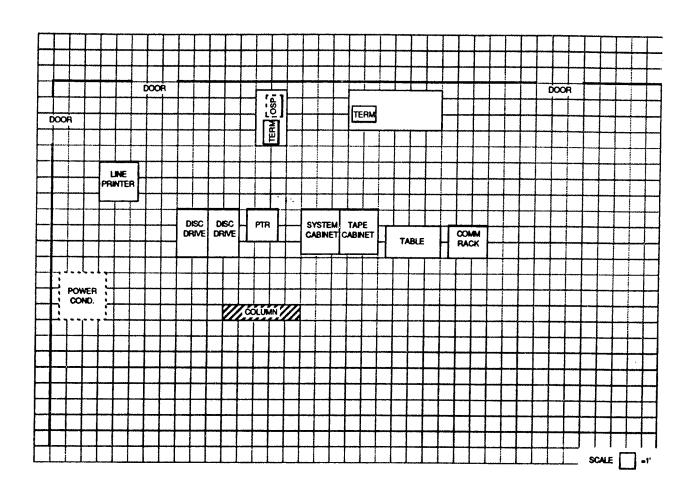


FIGURE 33-2. DETROIT MPS SITE # 33 - AFTER ENHANCEMENT

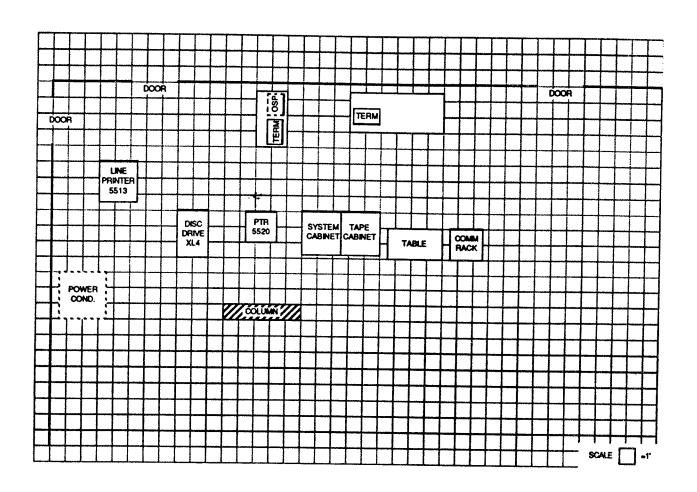


FIGURE 34-1. ST. LOUIS MPS SITE # 34 -BEFORE ENHANCEMENT

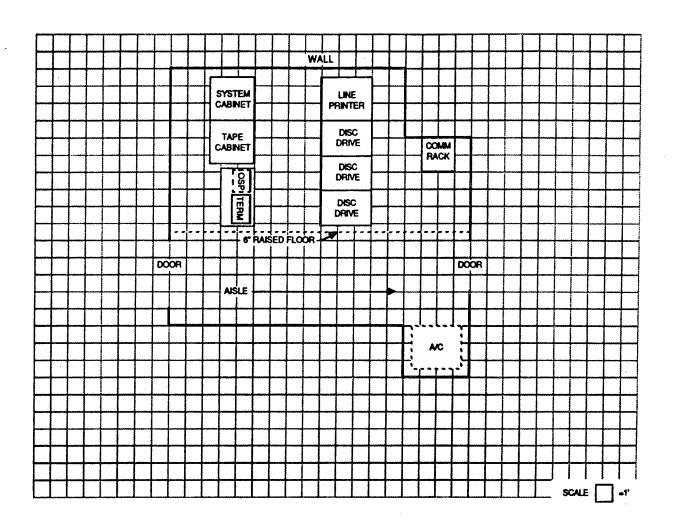


FIGURE 34-2. ST. LOUIS MPS SITE # 34 AFTER ENHANCEMENT

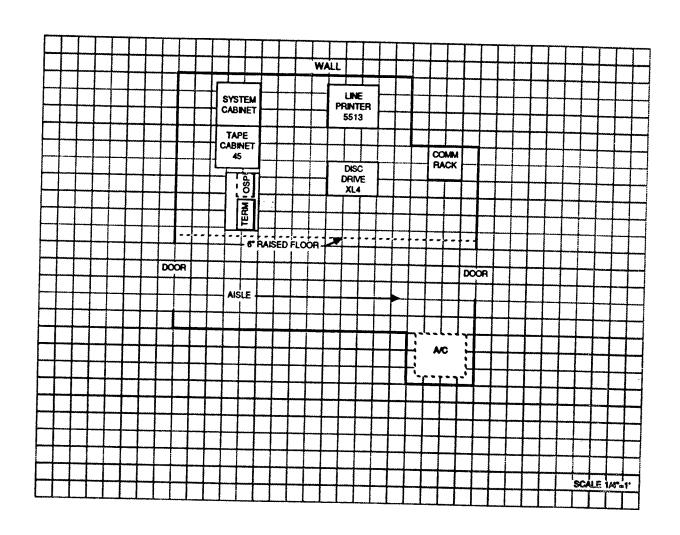


FIGURE 35-1. WICHITA MPS SITE # 35 - BEFORE ENHANCEMENT

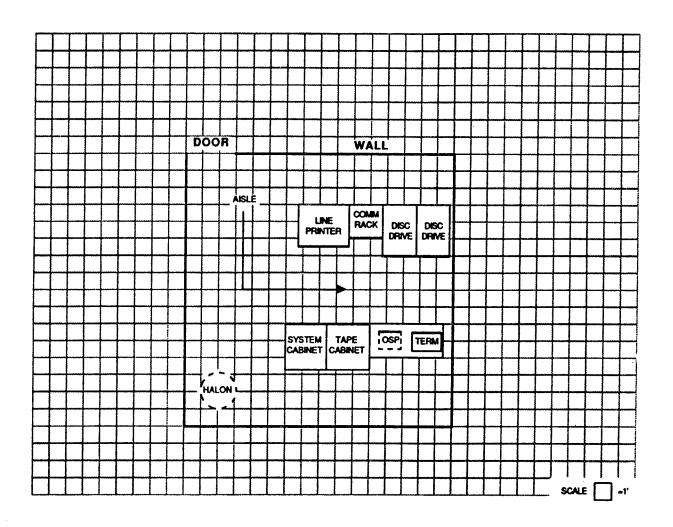


FIGURE 35-2. WICHITA MPS SITE # 35 - AFTER ENHANCEMENT

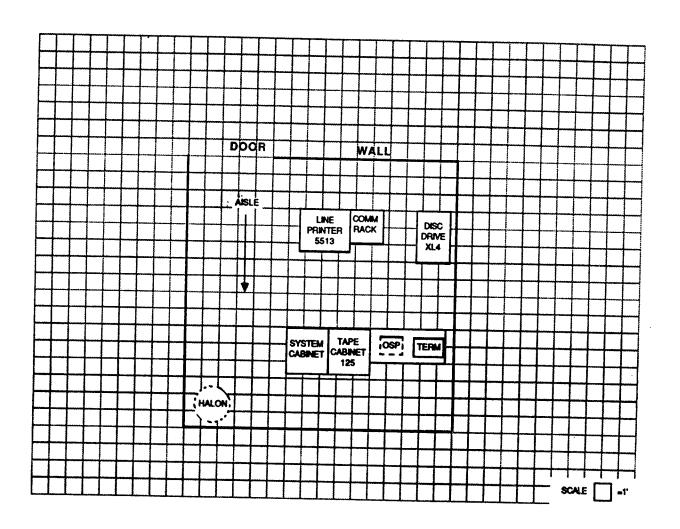


FIGURE 36-1. DENVER MPS SITE # 36 - BEFORE ENHANCEMENT

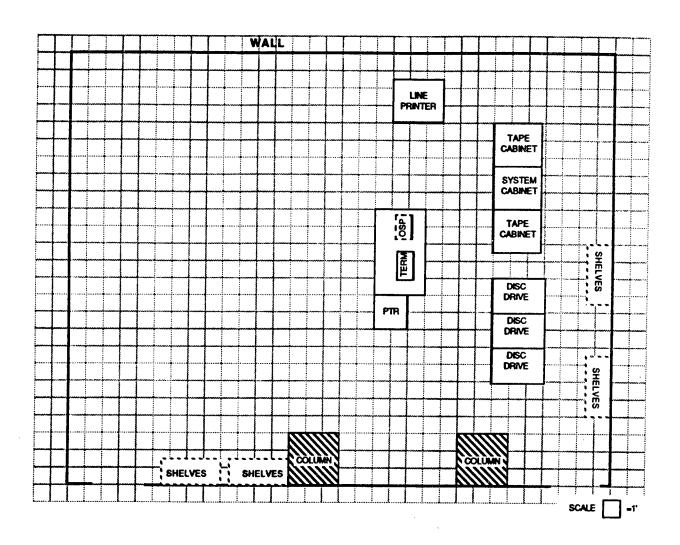


FIGURE 36-2. DENVER MPS SITE # 36 - AFTER ENHANCEMENT

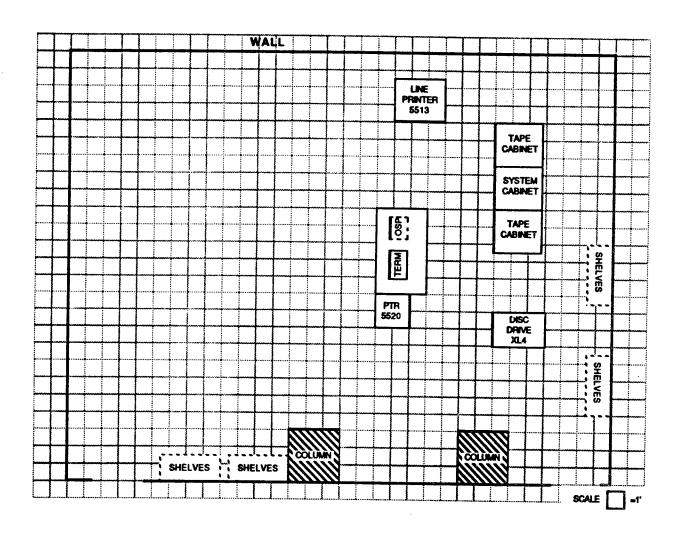


FIGURE 37-1. EDWARDS AFB MPS SITE # 37 - BEFORE ENHANCEMENT

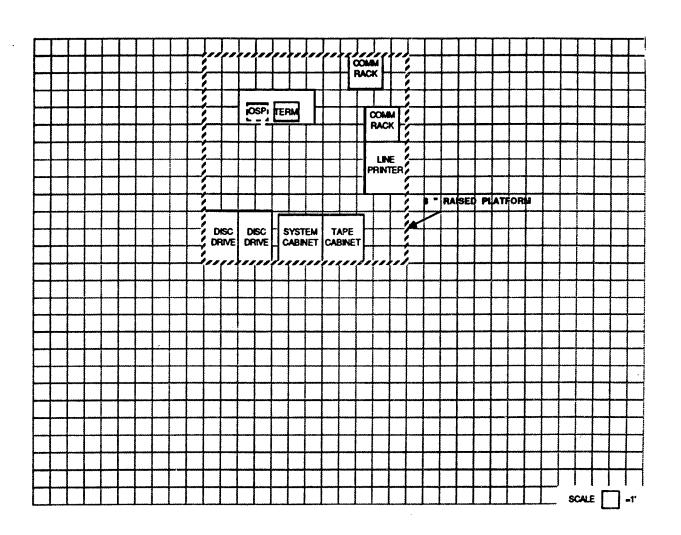


FIGURE 37-2. EDWARDS AFB MPS SITE # 37 - AFTER ENHANCEMENT

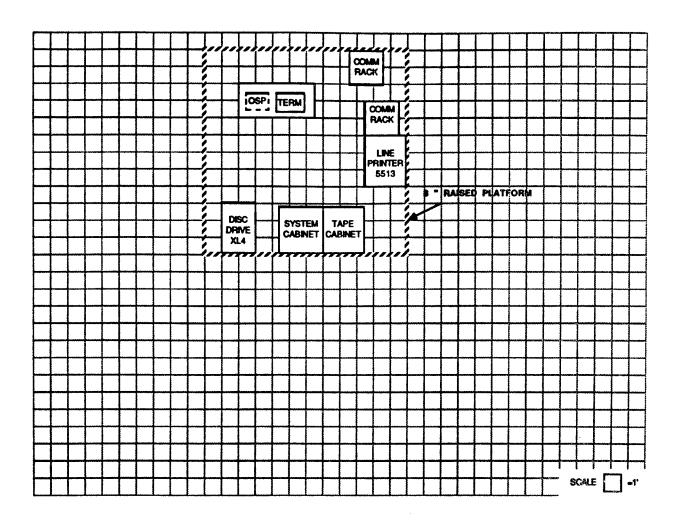


FIGURE 38-1. FAIRBANKS MPS SITE # 38 - BEFORE ENHANCEMENT

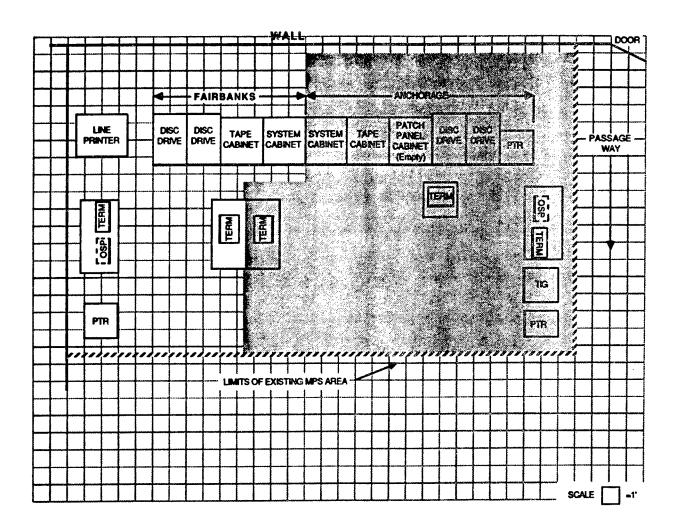
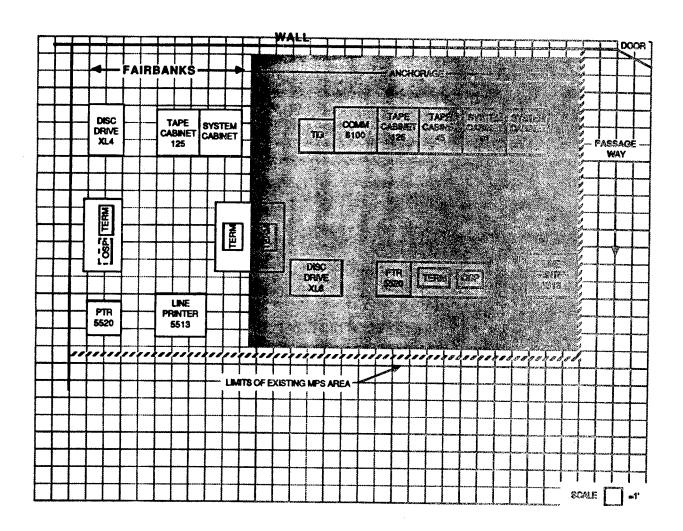


FIGURE 38-2. FAIRBANKS MPS SITE # 38 - AFTER ENHANCEMENT



APPENDIX 4. MPS SYSTEM CABINET BOARD LISTINGS AND LAYOUTS BEFORE AND AFTER MPS ENHANCEMENT

This appendix contains the system cabinet(s) board listings before MPS enhancement and system cabinet(s) board layouts after MPS enhancement for each MPS site. Each "before" board listing reflects information gathered during MPS site surveys conducted by ACT-110 from November through December 1987.

FIGURE 1-1. KANSAS CITY MPS SITE # 1 SYSTEM CABINET 1
CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU	2	54740	-	0.5 Mb Memory
CPU	3	57740	-	2.0 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	57613	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	54740	-	0.5 Mb Memory
CPU	10	54740	-	0.5 Mb Memory
CPU	11	54740	-	0.5 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor Unit
CPU	15	57613	-	(CCD) Channel Control/DDT
CPU	16	-	_	Open
CPU	17	54740	_	0.5 Mb Memory
CPU	18	54740	_	0.5 Mb Memory
CPU	19	54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor Unit
CPU		57613	•	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU	25	54740	-	0.5 Mb Memory
CPU	26	54740	_	0.5 Mb Memory
CPU	27	54740	-	0.5 Mb Memory
CPU	28	57740	-	2.0 Mb Memory
CPU	29	54770	-	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor Unit
CPU	31	57613	-	(CCD) Channel Control/DDT
CPU	32	-	-	Open

FIGURE 1-2. KANSAS CITY MPS SITE # 1 SYSTEM CABINET 1 I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O			***	Open
I/O		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
I/O	6	52990	6303	Async Front End Board
I/O	7	-	-	Open
1/0	8	-	-	Open
1/0	9	55820	3106a	Disc Controller SCU I/F
1/0	10	55900	3106a	Disc Controller Channel I/F
I/ 0	11	55930	3106a	Disc Controller SCU I/F
I/O	12	55900	3106a	Disc Controller Channel I/F
I/0	13	53000	6304	Async Extension Board
I/O	14	53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O	16	53000	6304	Async Extension Board
I/O	17	53000	6304	Async Extension Board
I/O	18	52990	6303	Async Front End Board
I/O		53570	6203	Bit Sync Controller
I/O	20	53570	6203	Bit Sync Controller
I/O	21	58810	6204	Bit Sync Controller
I/ 0	22	59210	6202	Byte Sync Controller
1/0	23	-	-	Open
1/0	24	-	-	Open

FIGURE 1-3. KANSAS CITY MPS SITE # 1 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

ALL CPU SLOTS ARE EMPTY -

SLOT ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O 1	59210	6202	Byte Sync Controller
I/O 2	55840	6202	Byte Sync Controller
I/O 3	58810	6204	Bit Sync Controller
I/O 4	58810	6204	Bit Sync Controller
I/O 5	-		Open Concrete
I/O 6	-	-	Open
I/O 7	-	_	Open
I/O 8	-	-	Open
I/O 9	-	-	Open
I/O 10	-	-	Open
I/O 11	-	-	Open
I/O 12	51210	3401	UI Controller
I/O 13	40880	3108-1	Disc Interface
I/O 14	40884	3108-1	Disc Controller
I/O 15	40880	3108-1	Disc Interface
I/O 16	40884	3108-1	Disc Controller
I/O 17	40880	3108-1	Disc Interface
I/O 18	40884	3108-1	Disc Controller
I/O 19	40880	3108-1	Disc Interface
I/O 20	40884	3108-1	Disc Controller
I/O 21	-	-	Open
I/O 22	-	-	Open
I/O 23	-	•	Open
I/O 24	-	-	Open

FIGURE 1-4. KANSAS CITY MPS SITE # 1 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

CPU CHASSIS																								
		;	8 SL	XP ME OT -8	3				8 SL	XF ME OT	S				5 SL	ISI ME 01 7-2	3 rs				SL	ISI MI .O'	B TS	
DESCRIPTION	_	1	RMh	MC	Ы	300	1	1	8Mb	MC	<u>م</u> ز	300	SMb.	SMb	2Mb	MCB	PU	3	.5Mb	.5Mb	2Mb	MCB	PU	3 '
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	1 12	2 13	14 1	5 16	17	181	9 20	21	222	23 24	25	26	27 28	29	30 3	31 32
I/O CHASSIS																								
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT		DISCIF	DISC CNTL.	DISCIF	DISC CNTL. S	DISCIF	DISC CNTL.	DISC I/F	DISC CNTL.	- 1 Ρ	-18		15	18	Z	Z	N	Z	Z
	¥	Ö	Ö	AS	AS	AS	SIQ	SIQ	SIQ	DIS	DIS	OIS	DIS	DIS	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	1	1	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	1		ı	1	ı
SLOT # I/O -	נבן	۲۵	اسا	[۴]	5	[6]	7	8	الصا	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		С	PU	PS			*	c	PU	PS	*			C	PU	*	*		*		CPU			

^{*} UPGRADE EQUIPMENT

FIGURE 1-5. KANSAS CITY MPS SITE # 1 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

	CPU CHASSIS																							
		((ΟP	ΕN	I)			(OP	ΈN	I)			(OF	EI	N)			(OF	E	N)	
DESCRIPTION																		T						T
SLOT # CPU -	1	2 3	4	5	6	7 8	9	10 1	1 12	13	4 1	5 16	17	18 1	9 20	21	222	3 24	25	262	728	29	30 3	1132
	OPTIONAL - EXTRA ——EQUIPMENT PLACEMENT I/O CHASSIS (NCP REQUIRED)													NT										
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICHIL	CIU-IP	CEU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	BITSYNC	BITSYNC	BITSYNC	BYTESYNC	ASYNC EXT.	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	_	_	-	-	-	_	6202	6204	6204	6204	8202	6304	6304	
SLOT # 1/O -	1	2	[6]	[4]	5	ဇ	7	8	loj	ارور	اچا	լ≌յ	เฉา	f 4	Լայ	ري	17	18	اي	20	21	22	23	24
·			0	PS			•	L	· /O	PS				l	/ 0	PS					(OF	E	()	

^{*} UPGRADE EQUIPMENT

FIGURE 2-1. LOS ANGELES MPS SITE # 2 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57602	-	0.5 Mb Memory
CPU	2	57603	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	54740	-	0.5 Mb Memory
CPU	10	54740	-	0.5 Mb Memory
CPU	11	54740	-	0.5 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	•	(IPU) Instruction Processor Unit
CPU	15	57613	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	57602	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor Unit
CPU	23	57612	-	(CCD) Channel Control/DDT
CPU	24	-	-	Open
CPU	25	-	•	Open
CPU	26	-	-	Open
CPU	27	-	***	Open
CPU	28	-	-	Open
CPU	29	-	-	Open
CPU	30	-	- .	Open
CPU		-	-	Open
CPU	32	-	-	Open

FIGURE 2-2. LOS ANGELES MPS SITE # 2 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0		52020	3202	Tape Controller
1/0		51210	3401	UI Controller
I/O		_	-	0pen
1/0		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		55820	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
I/O		55820	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
I/O		58810	6204	Bit Sync Controller
1/0		-	-	Open
I/ 0		-	_	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		-	-	Open
I/O		-	_	Open
I/O	18	59210	6202	Byte Sync Controller
I/O	19	-	-	Open
I/O	20	53000	6304	Async Extension Board
I/O	21	52990	6303	Async Front End Board
1/0	22	58810	6204	Bit Sync Controller
1/0	23	_		Open
1/0	24	-	-	Open

FIGURE 2-3. LOS ANGELES MPS SITE # 2 SYSTEM CABINET 1
CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

	CPU CHASSIS TXP TXP NSII NSII																								
		S	81 31	XP MB OT -8				\$	81 3 L	XP MB OT	S			;	5 SL	SI ME OT 7-2	'S				5 SL	ME ME .01	3 TS		
DESCRIPTION	1	1	8Mb	MC	م از	300	-	!	8Mb	MC	ا د	Sos	SMb.	.5Mb	2Mb	MCB	PU	3 1	.5Mb	SMb	2Mb	MCB .	3	3 1	
SLOT # CPU -	1	2 3	4	5	6	7 8	9	10 1	1 12	13	14 1		17	181	9 20	21	222	324	25	26 2	7 28	29	30 3	1 32	
	I/O CHASSIS																								
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL.	DISCIVE	DISC CNTL.	DISC IF	DISC CNTL.	DISC NF	DISC CNTL.	CIU-1P	CIU-1B	223	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN	
PRODUCT IDENT.	3202	_	i	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	1	1	1	_	
SLOT # 1/O -	1	2	Լայ	الحا	5	رھع	7	8	الما	10	ᄕᆍ	12	[3]	F 4	157	16	17	ر چ	L <u>9</u> _	₋ ه	Lã	ြસ	L	24	
		CPU PS						CPU PS						CPU PS							CPU PS				

^{*} UPGRADE EQUIPMENT

FIGURE 2-4. LOS ANGELES MPS SITE # 2 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	νŪ	(H	AS	SS	IS								····					
		((OP	ΕN	I)			(ΟP	ΈN	ł)			(OF	PΕΙ	N)				(01	PE	N)		
DESCRIPTION																									
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	101	112	13	41	5 16	17	181	9 20	21	222	23 24	25	263	27/28	29	30	313	
OPTIONAL - EXTRA EQUIPMENT PLACEMENT (NCP REQUIRED)																									
DESCRIPTION	BYTE SYNC	BIT SYNC	0	ASYNC EXT	ASYNC EXT	ASYNC F.E.	Τ.	CI THOID	G. P	SS 835	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	(1	OPEN	RE	OPEN	OPEN	ASYNCEXT. (9	ASYNC F.E.	
2202105	(B)	_	8	*	₹	¥	F	⋾	ð	ঠ	Ö	Ö	Ö	Ō	Ö	Q	ğ	စ်	g	ဝီ	Ö	စီ	SA	AS	
PRODUCT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	ı	1	ı	ı	1	_	1	,	1	,		-	6304	6303	
SLOT # I/O -	[-]	٦ °2	LwJ	[+-J	5	ر ق	٤	8	الها	10	1	7 12	13	14	15	16	17	18	19	- 20	21	22			
,	VO PS						I/O PS							I/O PS							(OPEN)				

^{*} UPGRADE EQUIPMENT

FIGURE 3-1. ANCHORAGE MPS SITE # 3 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	_	_	Open
CPU	2	54740	-	0.5 Mb Memory
CPU	3	57603	-	0.5 Mb Memory
CPU	4	57603	-	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	57612	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	-	_	Open
CPU	10	54740		0.5 Mb Memory
CPU	11	57603	-	0.5 Mb Memory
CPU	12	57603		0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	· -	(IPU) Instruction Processor
				Unit
CPU		57612	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
anı.	••	54040		Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU CPU		_	_	Open
CPU		_	-	Open
CPU :		_	-	Open
CPU :		_	***	Open
CPU .	36	-	-	Open

FIGURE 3-2. ANCHORAGE MPS SITE # 3 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

I/O 1 I/O 2 I/O 3 I/O 4 I/O 5 I/O 6 I/O 7 I/O 8 I/O 10 I/O 11 I/O 12 I/O 13 I/O 14 I/O 15 I/O 16 I/O 17 I/O 18 I/O 19 I/O 20 I/O 21 I/O 22 I/O 23 I/O 24	PART NUMBER 52020 51210 53000 53000 55930 55930 55930 55900 53000 52990 59210 53000 52990 58810	PRODUCT IDENT 3202 3401 6304 6303 3106 3106 3106 3106 3106 3106 3106	PRODUCT DESCRIPTION Tape Controller UI Controller Open Async Extension Board Async Extension Board Async Front End Board Disc Controller SCU I/F Disc Controller Channel I/F Disc Controller SCU I/F Disc Controller Channel I/F Open Open Open Open Async Extension Board Async Front End Board Open Byte Sync Controller Open Open Async Extension Board Async Extension Board Async Front End Board Async Extension Board Async Extension Board Async Front End Board Bit Sync Controller
	58810	6204	Open Bit Sync Controller

FIGURE 3-3. ANCHORAGE MPS SITE # 3 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

CPU CHASSIS																										
	TXP 8MB SLOTS 1-8						TXP 8MB SLOTS 9-16							NSII 5MB SLOTS 17-24							NSII 5MB SLOTS 25-32					
DESCRIPTION	-	MC MC CC CC SQ						1	8Mb	MC	<u>م</u> ن	So	.5Mb	SMb	2Mb	MCB	PU	3	SMb.	SMb.	2Mb	MCB	PU C	-		
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	1 12		14 1	_	17	181	9 20	21	222	324	25	26 2	27 28	29	30 3	132		
	I/O CHASSIS																									
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISCIF	DISC CNTL.	DISC I/F	DISC CNTL.	DISC I/F	DISC CNTL.	DISCIF	DISC CNTL.	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN		
PRODUCT IDENT.	3202 - - - - 6304 6304								3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	_	-	-	1		
SLOT # 1/O -	O - 123456							7 8 9 10 11 12					13 14 15 16 17 18						19 20 21 22 23 24							
,		CPU PS					CPU PS						CPU PS						CPU PS							

^{*} UPGRADE EQUIPMENT

FIGURE 3-4. ANCHORAGE MPS SITE # 3 SYSTEM CABINET 2
CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

CPU CHASSIS																										
		(OPEN)						(OPEN)						(OPEN)							(OPEN)					
DESCRIPTION																										
SLOT # CPU -	1	2 :	3 4	5	6	7 8	9	10 1	1 12	13	14 1	5 16	17	181	9 20	21	222	3 24	25	26 2	7 28	29	30 3	31 32		
	OPTIONAL - EXTRA ——EQUIPMENT PLACEMENT [/O CHASSIS (NCP REQUIRED)																									
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UI CNTL	CIU-IP	CIU-18	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN		OPEN	OPEN	EXT.	ASYNC F.E.		
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	1	ı	,	1	-	-	1		_	-	_	-	6304 /	6303		
SLOT # 1/O -	1	2	۲۳	[4]	5	ر ه	5	8	الصا	10	L =	12	13	14	15	- 6	17	r 25-	L 19	20	٦٦	22	L	24		
UPGRADE FOLIPMENT		I/O PS					VO PS						I/O PS							(OPEN)						

^{*} UPGRADE EQUIPMENT

FIGURE 4-1. CHICAGO MPS SITE # 4 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57602	-	0.5 Mb Memory
CPU	2	54740	_	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	_	(IPU) Instruction Processor
				Unit
CPU	7	57612	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	54740	-	0.5 Mb Memory
CPU	10	54740	-	0.5 Mb Memory
CPU	11	57602	-	0.5 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760		(IPU) Instruction Processor
				Unit
CPU		57612	_	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		57602	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	_	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		. -	_	Open
CPU		-	-	Open
CPU	32	-	-	Open

FIGURE 4-2. CHICAGO MPS SITE # 4 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	52020	3202	Tape Controller
I/0	2	51210	3401	UI Controller
I/ 0	3	-	_	Open
I/O		53000	6304	Async Extension Board
I/ 0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
I/0	7	-	-	Open
I/O		-	-	Open
I/O	9	55820	3106	Disc Controller SCU I/F
I/O	10	55900	3106	Disc Controller Channel I/F
I/O	11	55820	3106	Disc Controller SCU I/F
I/O	12	55900	3106	Disc Controller Channel I/F
I/O	13	-	-	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		-	-	Open
I/ 0	17	59210	6202	Byte Sync Controller
I/O	18	-	_	Open
I/ 0		-	-	Open
I/O		53000	6304	Async Extension Board
I/O	21	52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
I/O		-	-	Open
1/0	24	53570	6203	Bit Sync Controller

FIGURE 4-3. CHICAGO MPS SITE # 4 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

CPU CHASSIS																										
	TXP 8MB SLOTS 1-8							TXP 8MB SLOTS 9-16						NSII 5MB SLOTS 17-24							NSII 5MB SLOTS 25-32					
DESCRIPTION	MAC NAC CC SQ SQ						1	1 1	8Mb	Q.	ع ا≟	SOS	.5Mb	5Mb	2Mb	MCB	<u> </u>	3 1	.5Mb	.5Mb	2Mb	MCB	PG S	-		
SLOT # CPU -	1	2 3	4	5	6 7	8	9	10 1	1 12		4 15	_	17	18 1	9 20	21	222	324	25	26 2	728	29	30 3	132		
	I/O CHASSIS																									
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IF	DISC CNTL.	DISC IF	DISC CNTL.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	CIU-1P	C!U-1B	CC	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN		
PRODUCT IDENT.	3202	ı	ı	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	ı	1	÷			
SLOT # I/O -	[-]	2	$\lfloor \omega_1 \rfloor$	[4]	5	[۳]	7]	8	الما	ر9 ا	11	12	13	14	L 55	16	17	18	19	20	21	22	23	[گ		
		CPU PS						CPU PS						CPU PS							CPU PS					

^{*} UPGRADE EQUIPMENT

FIGURE 4-4. CHICAGO MPS SITE # 4 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

CPU CHASSIS																									
	T	3.0 OHA0010																							
		(OPEN)						(OPEN)						(OPEN)						(OPEN)					
DESCRIPTION																									
SLOT # CPU -	1,	1 2 3 4 5 6 7 8						10	1111	13	141	5 16	1,		1	 		+	+	H	+	+	╁	3132	
	OPTIONAL - EXTRA I/O CHASSIS (NCP REQUIRED)														NT										
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNIL	CIU - IP	CIU-18		OPEN	OPEN	OPEN	OPEN	OPEN	DPEN	OPEN	OPEN	OPEN			ASYNC EXT.	ASYNC F.E.	
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	_	1	-	1	-	-) _	_	<u> </u>	-	<u> </u>	- 10	6304 A	€303	
SLOT # 1/O -	1	٦ ٧	١صا	4	5	6	7	8	D	10	11	12	13	14	15	7 16	F 17	18	19	٦٤	21	72	1		
UPGRADE EQUIPMENT		I/O PS					VO PS						13 14 15 16 17 18							19 20 21 22 23 24 (OPEN)					

UPGRADE EQUIPMENT

FIGURE 5-1. ATLANTA MPS SITE # 5 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	-	0.5 Mb Memory
CPU	2	57602	-	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	57612	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	57602	-	0.5 Mb Memory
CPU	10	57602	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57612	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		57603	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-		Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU	32	-	· . ·	Open

FIGURE 5-2. ATLANTA MPS SITE # 5 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	52020	3202	Tape Controller
1/0		51210	3401	UI Controller
1/0		-	-	Open
1/0	4	53000	6304	Async Extension Board
1/0	5	53000	6304	Async Extension Board
1/0	6	52990	6303	Async Front End Board
I/O		55930	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
1/0		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		-	-	Open
I/O		-	-	Open
1/0		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		_	-	Open
1/0		59210	6202	Byte Sync Controller
I/O		-	-	Open
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
I/0		-	_	Open
I/0	24	58810	6204	Bit Sync Controller

FIGURE 5-3. ATLANTA MPS SITE # 5 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

				(CP	U	C	H	AS	S	IS												
		8 SL	XP MB OT -8				\$	81 3L	XP MB OT				;	5 SL	SII MB OT	S				5 SL	ME ME 01 5-3	S	
DESCRIPTION	1 1	- MA	MC	ط ا	SO	1	ı	8Mb	MC	2 ک	Sos	SMb.	.5Mb	2Mb	MCB	PO CO	331	.5Mb	5Mb	2Mb	MCB	<u>P</u>	-
SLOT # CPU -	1 2	3 4	5	6 7	8	9	10 1	1 12	13	4 1	5 16	17	18 11	9 20	21	222	324	25	26 2	:7 28	29	30 3	1 32
	10 m a 20 m a 10 m				I/C	<u> </u>	CH	AF	SS	SIS				·								· · · · · · · · · · · · · · · · · · ·	
DESCRIPTION	TAPE CNTL.	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IF	DISC CNTL	DISCIF	DISC CNTL	DISCIF	DISC CNTL	DISCIF	DISC CNTL.	CIU-1P	CIU-1B	<u> </u>	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	ı	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	1	ł	-	1
SLOT # I/O -	<u>1</u> 2	3	4	5	الھا	[۲۰]	۳	الما	, <u>1</u> 0	12	12	13	14	Լբյ	_[6]	17	رچر	ايوا	۲۶	21	ူသ	23	24
		CPU	P\$	5		•	c	PU	P:	•	*	*	•	PU	*	s	•	•		CPL	; P	s	

^{*} UPGRADE EQUIPMENT

FIGURE 5-4. ATLANTA MPS SITE # 5 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						C	Ρl	<u> </u>	Cŀ	1 1	<u> </u>	IS												
		(10)	PEI	N)				(01			113		1	(01	PE	N)	 -			(0	PE	EN)	ı
DESCRIPTION																			+					
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10	11/12	213	141	5 16	17	181	9 20	21	22	232	4 25	26	27/2	-		313
				.		1/0	<u>)</u>	CI	AH	S	SIS						OF EC	UIF	PME	NT	EXT PL	ACI	EME	NT
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	Π	Т	П		CIU.B		OPEN	OPEN	OPEN	OPEN	OPEN	OPEN		OPEN				ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	<u> </u>	<u> </u>	0 _	0	0 _	0 -	0 -	0 -	0 -	0	0	ō	6304 AS	6303 AS
SLOT # 1/0 -	1	۲۳	LwJ	1	5	ار م	7	8	ş	10	1	12	13	14	15	16	17	18	19	<u>ر</u> ه	21	22	-	
UPGRADE EQUIPMENT		1/0	0 1	PS				l/	0 1	•					0						(OP			2

UPGRADE EQUIPMENT

FIGURE 6-1. FT. WORTH MPS SITE # 6 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57603	-	0.5 Mb Memory
CPU	2	57601	-	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	57612		(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	54740	-	0.5 Mb Memory
CPU	10	54740	-	0.5 Mb Memory
CPU		57602	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57615	-	(CCD) Channel Control/DDT
CPU			-	Open
CPU		57603	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		•	-	Open
CPU		_	-	Open
CPU		_	_	Open
CPU		_	_	Open
CPU		- -	_	Open
CPU	32	-	-	Open

FIGURE 6-2. FT. WORTH MPS SITE # 6 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	52020	3202	Tape Controller
I/O		-	-	Open
I/ 0		-	_	Open
I/O	4	53000	6304	Async Extension Board
1/0	5	53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
I/ 0		55930	3106	Disc Controller SCU I/F
I/ 0	8	55900	3106	Disc Controller Channel I/F
I/O	9	55930	3106	Disc Controller SCU I/F
I/ 0		55900	3106	Disc Controller Channel I/F
I/ 0		53570	6203	Bit Sync Controller
I/ 0	12	-	-	Open
I/0	13	-	-	Open
I/ 0		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O	16	55840	6202	Byte Sync Controller
I/O	17	59210	6202	Byte Sync Controller
I/O	18	51210	3401	UI Controller
I/O	19	-	-	Open
I/ 0	20	53000	6304	Async Extension Board
I/O	21	52990	6303	Async Front End Board
I/ 0	22	58810	6204	Bit Sync Controller
I/O	23	-	_	Open
1/0	24	58810	6204	Bit Sync Controller

FIGURE 6-3. FT. WORTH MPS SITE # 6 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	טי	(H	AS	SS	IS												
		\$	81 3L	XP MB OT -8				;	8 S L	XP MB OT	S				5 SL	SI ME 01	S				5 SL	ISI MI .O.	B TS	
DESCRIPTION	-	1	8Mb	MC	هـ اق	၁၁၀		ı	8Mb	MC	<u>م</u> ک	So	.5Mb	.5Mb	2Mb	MCB	26	3	.5Mb	.5Mb	2Mb	MCB	PU	8 '
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	101	112	13	141	5 16	17	18 1	9 20	21	222	23 24	25	262	2728	29	30	31 32
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISCIVE	DISC CNTL O	DISC NF DISC NF	DISC CNTL S	DISC IF	DISC CNTL	DISC IF	DISC CNTL	CIU-1P	CIU-1B	201	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	UI. CNTL.
PRODUCT IDENT.	3202	1	1	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	1	-	ı	l	3401
SLOT # I/O -	[-]	2	الصا	ادعا	Lտ	رص	[۲]	ا ھ	رما	<u>_</u> 9_	11	12	13	14	15	ր 16	17	ر <u>18</u>	19	20	21	25	23	
UPGRADE EQUIPMENT	·	С	PU	PS	3		•	c	PU	PS	•	•	•	•	PU	*	•	•	•	30.	CPL		'S	

FIGURE 6-4. FT. WORTH MPS SITE # 6 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	U	(H	AS	SI	S	•											
		((ЭP	EN	l)			(ΟP	EN	1)			(OP	Έl	٧)			((01	>E	N)	
DESCRIPTION																					T			
SLOT # CPU -	1	2 3	4	5	6 7	8	9	101	1 12	13	4 15	16	17	18 19	9 20	21	222	3 24	25	26 2	27 28	29	30 3	1132
			·			I/C)	Cŀ	ΙA	SS	IS							NUIF	ME	NT	EXT PLA	ACE		NT
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNTL	CIU - IP	CIU-18	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN		OPEN	OPEN	BYTE SYNC	Γ	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	-	_	_	-) –) -) -	1	<u> </u>	<u> </u>	6202		6304	6303
SLOT # I/O -	1	rα	۲۳٦	لوب	L 5	٦٩٦	الم	ا م	الما	اوع	11	12	13	14	L 15	16	17	18	L 9	r 20	21	22		
		I/	•	PS			•	V	0	•				ı	/O	PS					(OF	•		

^{*} UPGRADE EQUIPMENT

FIGURE 7-1. SAN JUAN MPS SITE # 7 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	_	Open
CPU	2	57603	_	0.5 Mb Memory
CPU	3	57603	-	0.5 Mb Memory
CPU	4	57603	-	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	-	_	Open
CPU	10	54740	-	0.5 Mb Memory
CPU	11	57603	-	0.5 Mb Memory
CPU	12	57602	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57613	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		57603	_	0.5 Mb Memory
CPU		57603	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		57612	-	(CCD) Channel Control/DDT
CPU		-	_	Open
CPU		-	_	Open
CPU		-	-	Open
CPU		-	-	Open
CPU	_	-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU	32	-	-	Open

FIGURE 7-2. SAN JUAN MPS SITE # 7 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	52020	3202	Tape Controller
I/O		51210	3401	UI Controller
I/0		-	_	Open
I/O		53000	6304	Async Extension Board
1/0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O	9	55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/0		-	-	Open
I/O		-	-	Open
I/O		-	-	Open
I/O		-	-	Open
I/ 0		-	_	Open
1/0		-	-	Open
1/0		59210	6202	Byte Sync Controller
1/0		-	-	Open
1/0		-	-	Open
I/ 0		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
1/0		-	-	Open
I/O	24	-	_	Open

FIGURE 7-3. SAN JUAN MPS SITE # 7 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CI	טפ	(ЭН	A	SS	IS												
		;	8 SL	XP MB OT -8	}				7 8 8 L	XP MB OT	'S				5 SL	ISI ME 01	S				5 SL	ISI MI .O	B TS	
DESCRIPTION	-	i	AMP.	MC	В	300	_	ì	8Mb	ΨC	<u>م</u> ز	30%	.5Mb	5Mb	SM SM SM SM SM SM SM SM SM SM SM SM SM S	MCB	<u></u> 2 6	3 '	.5Mb	.5Mb	ZWD ZWD	MCB	PU	8 1
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	1 12	13	141	5 16	17	18 1	9 20	21	222	23 24	25	262	27 28	29	30 3	31 3
	نے		<u> </u>	þ	E	1/0	<u> </u>	CI	ΗA		SIS				<u></u>				-					
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IVE	DISC CNTL.	DISC NF	DISC CNTL.	DISC IF	DISC CNTL.	DISC IF	DISC CNTL.	CIU-1P	CIU-1B		CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
	Ţ	0	Ō	¥	\$	AS	ă	ă	ద	ă	D)	ă	ŏ	Sia	ಶ	ಶ	8	ᅙ	증	Ö	Ö	Ö	Ö	ō
PRODUCT IDENT.	3202	1	1	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	1	ı	1	1	1
SLOT # I/O -	[-]	2	الصا	[]	L 5	ار ها	[7]	8	٦	10	11		7		15	16		18		20	<u>-</u> 21	22	23	24
		C	PU	PS	;		•	¢	PU	PS	•	•	•	•	PU	•	•	•	•		:PU			

FIGURE 7-4. SAN JUAN MPS SITE # 7 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						C	ΡU	(СН	IA:	SS	IS								****				
		(OF	PΕΙ	۷)				OF						10)	PE	N)	**************************************			(0	PE	N)	
DESCRIPTION																								
SLOT # CPU -	1	2	3 4	5	6	7 ε	9	10 1	1 12	13	14 1	5 16	1,7	18 1	9 20	21	222	23 24	4 25	26 2	27/29	29	30	31 32
	T		····			1/0)	CI	A	SS	SIS									·	···			
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	Г	Π	CEU-IP	CIU-1B			OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101		1	_	-	1	_	-	-	-	-)) -	_	<u> </u>)
SLOT # 1/O -	[-]	2	الصا	[]	5	٦	2	۳	٥	- 2	11	12	13	74	15	16	17	18	١	720	21	22	23	24
IIPCDADE EQUIDAÇAT		1/	0 1	PS			•	ı	0	•					/O						OF			

* UPGRADE EQUIPMENT

FIGURE 8-1. HOUSTON MPS SITE # 8 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT ID	PART /# NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU 1	57740	-	2.0 Mb Memory
CPU 2	54740	-	0.5 Mb Memory
CPU 3	57601	-	0.5 Mb Memory
CPU 4	57601	_	0.5 Mb Memory
CPU 5	54770	-	(MCB) Memory Control Board
CPU 6	54760	-	(IPU) Instruction Processor
			Ùnit
CPU 7	54840	-	(CCD) Channel Control/DDT
CPU 8	-	_	Open
CPU 9	57740	_	2.0 Mb Memory
CPU 10	54740	_	0.5 Mb Memory
CPU 11		-	0.5 Mb Memory
CPU 12	54740	_	0.5 Mb Memory
CPU 13		_	(MCB) Memory Control Board
CPU 14		-	(IPU) Instruction Processor
			Unit
CPU 15	57612	-	(CCD) Channel Control/DDT
CPU 16		_	Open
CPU 17		-	2.0 Mb Memory
CPU 18	54740	-	0.5 Mb Memory
CPU 19			0.5 Mb Memory
CPU 20		-	0.5 Mb Memory
CPU 21			(MCB) Memory Control Board
CPU 22	54760	-	(IPU) Instruction Processor
			Unit
CPU 23	54840	-	(CCD) Channel Control/DDT
CPU 24	-	-	Open
CPU 25	-	-	Open
CPU 26	-	_	Open
CPU 27	-	-	Open
CPU 28	-	-	Open
CPU 29	-	-	Open
CPU 30	-	-	Open
CPU 31	-	-	Open
CPU 32	-	-	Open

FIGURE 8-2. HOUSTON MPS SITE # 8 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	58000	3202	Tape Controller
I/O		51210	3401	UI Controller
I/ 0		-	-	Open
1/0	4	53000	6304	Async Extension Board
I/ 0		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
I/ 0		55930	3106	Disc Controller SCU I/F
I/ 0	8	55900	3106	Disc Controller Channel I/F
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		53570	6203	Bit Sync Controller
I/O		-	-	Open
I/O		-	-	Open
I/ 0		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
1/0		-	_	Open
1/0		55840	6202	Byte Sync Controller
I/O		-	-	Open
1/0		-	-	Open
I/O		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
I/0		-	-	Open
I/O	24	53570	6203	Bit Sync Controller

FIGURE 8-3. HOUSTON MPS SITE # 8 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

		$\overline{}$				CF	U	(H	AS	S	IS												
		-) [*]	81 3 L 6	XP MB OT -8				\$	8 3 L	XP MB OT	S			,	5 SL	SII MB OT	S				5 SL	ISI ME .01	B TS	
DESCRIPTION	1	ı	8Mb	MC	ع اد	30%	-		8Mb	MC	ع ا	SO	.5Mb	5Mb	2Mb	MCB	<u> </u>	3 1	.5Mb	.5Mb	2Mb	MCB	PU	3 -
SLOT # CPU -	1	2 3	3 4	5	6 7	8	9	101	1 12	13	14 1!	5 16	17	18 11	9 20	21	222	324	25	262	7 28	29	30 3	31 32
			····	T		1/0)	Cŀ	AF	SS	SIS													
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IF	DISC CNTL.	DISC IVE	DISC CNTL.	DISC IF	DISC CNTL.	DISCIF	DISC CNTL.	CIU-1P	CIU-1B	O	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
	TA	Ō	Ō	₹	AS	AS	ă	ŏ	<u>8</u>	ă	ă	ă	ă	芦	ಶ	ಶ	8	ಠ	ಠ	Ŏ	Ō	Ö	Ö	Ŏ
PRODUCT IDENT.	3202	_		6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	ı	ı	ı	1
SLOT # 1/O -	[-]	۲~	ال صا	[*]	5	ا ما	[7]	8	الما	10	11	12	13	14	15	16	17	18	19	20	21	25	23	24
		С	PU	┪╏╃┪						PS	•	•	*	C	PU	P	٠	•	•		CPL			

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FIGURE 8-4. HOUSTON MPS SITE # 8 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CI	PU		СН	A	SS	IS												
		(OF	ÈΙ	۷)			(OF	ÈΙ	V)			((01	PE	N)				(0	PE	N)	***********
DESCRIPTION																			1-					
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	11 12	13	14 1	5 16	17	18 1	9 20	21	22	23 2	4 25	26	27 28	29	30 :	3132
	٥	<u> </u>	Ī	<u></u>	F	1/C	Τ.		HA	ss	SIS)	Γ	<u> </u>			OF -EC	UIF	ME	NT	EXT PL/	NCE	Ť.	Γ.
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNT	UI CATIL	QP	GU-18	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BITSYNC	OPEN	OPEN	ASYNC EXT	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	-			-	1	-	1	ı	ı	6203/4	_	ı	6304	6303
SLOT # 1/O -		۲۵	3	4	5	G	٤	8	اها	<u> </u>	7	r-24	ليا	14	15	16	17	18	19	۲8	21	22	1	
LIPODADE FOLUDATENT		1/	0	PS				L	· /0	PS				l.	/ 0	PS					(OF			

^{*} UPGRADE EQUIPMENT

FIGURE 9-1. JACKSONVILLE MPS SITE # 9 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	-	0.5 Mb Memory
CPU	2	54740	_	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57740	_	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(MCB) Memory Control Board (IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
	9	57601	-	0.5 Mb Memory
CPU		57601	•	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor Unit
CPU	15	57613	_	(CCD) Channel Control/DDT
CPU		-	_	Open
CPU		57603	-	0.5 Mb Memory
CPU		57601	_	0.5 Mb Memory
CPU		57603	_	0.5 Mb Memory
CPU		57740	_	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU		54760	_	(IPU) Instruction Processor
				Unit
CPU	23	54840	_	(CCD) Channel Control/DDT
CPU	24	_	_	Open
CPU	25	_	_	Open
CPU	26	-	-	Open
CPU	27	-	-	Open
CPU	28	-	-	Open
CPU	29	-	-	Open
CPU	30	-	-	Open
CPU		-		Open .
CPU	32	. •••	-	Open

FIGURE 9-2. JACKSONVILLE MPS SITE # 9 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tane Controller
I/0		51210	3401	Tape Controller UI Controller
I/O		-	_	Open
I/O	4	53000	6304	<u> </u>
I/O	5	53000	6304	Async Extension Board
I/0	6	52990	6303	Async Extension Board
I/O	7	55930	3106	Async Front End Board
I/O	8	55900	3106	Disc Controller SCU I/F
I/ 0	9	55930	3106	Disc Controller Channel I/F
I/O	10	55900	3106	Disc Controller SCU I/F
I/O		58810	6204	Disc Controller Channel I/F
I/O	12	-	_	Bit Sync Controller Open
I/O		-	_	Open
I/O	14	53000	6304	
I/O	15	52990	6303	Async Extension Board
I/O		-	-	Async Front End Board Open
I/O		59210	6202	
I/O	18	-	_	Byte Sync Controller Open
I/O .		-	-	Open
I/0 :		53000	6304	Async Extension Board
I/O :		52990	6303	Async Excension Board
I/O :		58810	6204	Async Front End Board Bit Sync Controller
I/O :		-	-	Open
I/O :	24	-	-	Open

FIGURE 9-3. JACKSONVILLE MPS SITE # 9 SYSTEM CABINET 1
CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	Ų	(H	AS	S	IS												
		Ş	81 3L	XP MB OT -8				;	8 S L	XP MB OT	S				5 SL	ME 01 7-2	S				5 SL	ISI MI .O' 5-3	3 TS	
DESCRIPTION	t	}	8Mb	MC	ط اخ	SO	1	1	8Mb	MC	ط ک	300	.5Mb	.5Mb	2Mb	MCB	PC	3 '	.5Mb	.5Mb	2Mb	MCB	PU	<u> </u>
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	101	1 12	13	141	516	17	18 1	9 20	21	222	23 24	25	262	27 28	29	30 3	31 32
						I/C)	CI	ΙA	SS	SIS				· · · · · ·	-					·····			
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL.	DISCIF	DISC CNTL.	DISC IF	DISC CNTL.	DISC NF	DISC CNTL.	CIU-1P	CIU-1B	20	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	ı	-	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101		6101	6101	6101		1	_	_	1
SLOT # 1/O -	1	2	۲۳٦	لهم	Ls	ر م	لما	₂ 00	الما	10	11	12	13	14	L 55	16		۳٦)	19	₂ 20	31	₋ ي	23	24
* LIPGRADE FOLJIPMENT		С	PU	P\$)		•	c	PU	PS	•	•	•	·	PU	P	•	•	•	(CPU	J P		

FIGURE 9-4. JACKSONVILLE MPS SITE # 9 SYSTEM CABINET 2
CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						C	PU		CH	IA:	SS	IS												
		(OF	PΕΙ	٧)			((OF	PE	V)			Í	(01	PE	N)				(0	PE	N)	
DESCRIPTION																						T		
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10	11/12	2 13	14 1	5 16	17	181	9 20	21	22	232	4 25	26	27/2	-		31 32
	·		·			1/0	<u>)</u>	CI	НА	SS	SIS		*****		··· <u>-</u> -		OF EC	UIF	ME	NT	EXT PL/	ACE	EME	NT
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNIIL	CIU-IP	CIU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN			ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	ı	1	1	-	_) _) -) -	-	<u> </u>) -	<u> </u>	6304 A	6303 A
SLOT # 1/0 -	1	2	الصا	[4]	5	ال ها	7	8	الم	, <u>o</u>	11	12	13	14	15	16	17	18	19	20	21	22		
IPGRADE EQUIDAGNIT		1/4	0 1	PS			•	V	0	•					'O						OP			

^{*} UPGRADE EQUIPMENT

FIGURE 10-1. ALBUQUERQUE MPS SITE # 10 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57740	-	2.0 Mb Memory
CPU	2	57603	-	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57602	-	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	57613	-	(CCD) Channel Control/DDT
CPU	8	_	-	Open
CPU	9	57740	-	2.0 Mb Memory
CPU	10	57602	-	0.5 Mb Memory
CPU	11	57601	-	0.5 Mb Memory
CPU	12	57601	-	0.5 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57612	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		57740	-	2.0 Mb Memory
CPU		57603	-	0.5 Mb Memory
CPU		57603	-	0.5 Mb Memory
CPU		57603	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		•	-	Open
CPU	32	-	-	Open

FIGURE 10-2. ALBUQUERQUE MPS SITE # 10 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O 1 I/O 2 I/O 3	58000 51210 -	3202 3401	Tape Controller UI Controller Open
I/O 4 I/O 5 I/O 6	53000 53000 52990	6304 6304 6303	Async Extension Board Async Extension Board Async Front End Board
I/O 7 I/O 8 I/O 9	55930 55900 55930	3106 3106 3106	Disc Controller SCU I/F Disc Controller Channel I/F Disc Controller SCU I/F
I/O 10 I/O 11 I/O 12 I/O 13	55900 - -	3106 - -	Disc Controller Channel I/F Open Open
I/O 13 I/O 14 I/O 15 I/O 16	53000 52990	6304 6303	Open Async Extension Board Async Front End Board
I/O 17 I/O 18 I/O 19	59210	6202	Open Byte Sync Controller Open
I/O 20 I/O 21 I/O 22	53000 52990 58810	6304 6303 6204	Open Async Extension Board Async Front End Board
I/O 23 I/O 24	53570 53570	6203 6203	Bit Sync Controller Bit Sync Controller Bit Sync Controller

FIGURE 10-3. ALBUQUERQUE MPS SITE # 10 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

	_	-				CF	Ų	(H	AS	SS	IS												·
		5	81 3 L G	ХР МВ ОТ -8	;			•	81 3 L	XP MB OT	S				5 SL	SI ME 01	S	•			5 SL	ISI MI 0	3 rs	
DESCRIPTION	-		8Mb	MC	<u>م</u> ک	300	1		8Mb	Ç	ع ك	308	.5Mb	.5Mb	2Mb	MCB	26	3 '	.5Mb	.5Mb	2Mb	MCB	PU	3 '
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	10 1	1 12	13	141	5 16	17	18 1	9 20	21	222	23/24	25	26 2	27/28	29	30 3	31 32
DESCRIPTION	CNTL.			EXT	ЕХТ). F.E.		CH		,		Ä.		NT.										
DESCRIPTION	TAPE CNTL	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E	AI OSIQ	DISC CNT	DISC IF	DISC CNT	DISC IF	DISC CNTL	DISC IF	DISC CNT	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	1	-	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	1	1	1	1	1
SLOT # I/O -	[-]	- ω	لاما	[4]	5	ال	7	8	ړه_	10	11	12	13	14	L 15	16	17	18	19	20	21	22	23	24
UPGRADE FOLIPMENT		C	PU	PS	}		•	c	PU	PS	•	•	*	c	PU	P:	\$	•	•	(CPU			

FIGURE 10-4. ALBUQUERQUE MPS SITE # 10 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

	,					CF	νŪ	(H	AS	S	IS												
		((ΟP	ΈN	1)			(OP	'EN	1)			(OF	ΈI	V)			((01	PE	N)	
DESCRIPTION																					T			T
SLOT # CPU -	1	2 3	4	5	6	7 8	9	10 1	1 12	13	4 15	5 16	17	18 11	9 20	21	222	324	25	26 2	7 28	29	30 3	1 32
			I			I/C)	CI	1A	SS	IS						OF EC	TIC VUIF	MA ME NCF	NT	PL	ACE	ME D)	NT
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICMIL	CIU-IP	CIU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BITSYNC	OPEN	OPEN	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	ı	1	-	_	-	-	-	1		6203/4	1		6304 /	6303
SLOT # 1/0 -		٦ م	۲۳	4.	اما	ر ها	7	₋ ∞	الما	ارق. ا	=1	12	Lg	14	15	- 6	17	18	لوا	٢8	L 21	<u>- ي</u>	23	
LIPORADE FOLIDAENT		1/	•	PS				L	· ′0	PS				Ì	/O	PS					(0)			

^{*} UPGRADE EQUIPMENT

FIGURE 11-1. MIAMI MPS SITE # 11 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	-	0.5 Mb Memory
CPU	2	57601	-	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
an.	-	57613		
CPU		57613		(CCD) Channel Control/DDT
CPU		- 57600	_	Open
CPU		57603	_	0.5 Mb Memory
CPU		57602 57603	_	0.5 Mb Memory 0.5 Mb Memory
CPU		57603 57740	_	2.0 Mb Memory
CPU		57740	-	(MCB) Memory Control Board
CPU		54770	-	(IPU) Instruction Processor
CPU	14	54760	-	Unit
CPU	15	57613	_	(CCD) Channel Control/DDT
CPU	16	_	_	Open
CPU		57603	_	0.5 Mb Memory
CPU	18	57603	-	0.5 Mb Memory
CPU	19	57603	-	0.5 Mb Memory
CPU	20	57740	-	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU	23	54840		(CCD) Channel Control/DDT
CPU	24	-	-	Open
CPU	25	•	-	Open
CPU	26	•	-	Open
CPU	27	-	-	Open
CPU	28	-	•	Open
CPU	29	_	-	Open
CPU	- -	-	-	Open
CPU	31	-	-	Open
CPU	32	-	-	Open

FIGURE 11-2. MIAMI MPS SITE # 11 SYSTEM CASINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	58000	3202	Tape Controller
I/0		51210	3401	UI Controller
I/ 0		-	-	Open
I/0		-	-	Open
I/ 0		53000	6304	Async Extension Board
I/0		52990	6303	Async Front End Board
1/0		55930	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
1/0		55930	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
I/ 0		-	-	Open
1/0		-	-	Open
1/0		-	-	Open
1/0		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
I/0		-	-	Open
1/0		59210	6202	Byte Sync Controller
I/0		-	-	Open
1/0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
I/O		-	-	Open
I/0		58810	6204	Bit Sync Controller
1/0		-	-	Open
1/0	24	-	-	Open

FIGURE 11-3. MIAMI MPS SITE # 11 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					C	P)	U	С	H/	18	SI	S												\Box
			TX 8M LC	IB)TS	6				TX 8N LC 9-	IB OTS	5				NS 5 M 6 L C 17	AB OT:				•	51 3L	SII MB OT -3		
DESCRIPTION		! 1	8Mb	2€	28	SO	1	,	8Mb	Ş	ျှ	SQ	:SMb	2Mb	2Mb	MCB	200	1	.5Mb	OMC.	2Mb	MCB	2 5	3 '
SLOT # CPU -	1	2 3	4	5	5 7	8	9 1	0 1 1	12	13 1			17 1	B 19	20	212	222	24	25	26 2 [.]	28	293	ю 3	1 32
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL	DISC NF	DISC CNTL.	Н	DISC CNTL	CIU-1P	CIU-1B	201	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	ı	1	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	1	-	1	1
SLOT # I/O -	15	2	3	1	5	ر» ₋	Σ	8	رما	10	اءًا	12	L	F-4	15	16	17	رءِ ۔	لوا	۲8	Lãŋ	ᄱ	23	24
* LIPGRADE FOUIPMENT		C	PU	P:	\$		•	•	PU	P	•	•	•	•	CPU	•	s	•		I	CPI			

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FIGURE 11-4. MIAMI MPS SITE # 11 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

				···		CF	Ų		H	AS	S	IS										ik najurz	ACRES DE	V
		(0P	ΕN	i)			(OP	ΈN	1)			(OF	ÈΙ	۷)				(01	ÞΕ	N)	
DESCRIPTION																	27675							
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	10 1	1 12	13	14 1	5 16	17	181	9 20	21	222	23 24	25	26 2	27 28	29	30 3	3132
	T	····				1/0)	CI	AF	SS	SIS			ilenius non				XUIF	МЕ	NT	EXT PL/	ACE		NT
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UI CNTI.	CEU-PP	SE-150	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN		OPEN	OPEN	OPEN	OPEN		ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304		3207	3401	6101	6101	(-	-	-	-	-		-	-	-)		6303 A
SLOT # 1/0 -	[-]	2	3	1	L 5	5	٤	8	الما	10	==1	12	13	-4	L ₅	16	17	18	19	20	ر دي	22	23	اسسا
		V	0	Ps			•	L	0	PS					/0			•			(OF			

^{*} UPGRADE EQUIPMENT

FIGURE 12-1. OAKLAND MPS SITE # 12 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	***	Open
CPU	2	54740	-	0.5 Mb Memory
CPU	3	54740	-	0.5 Mb Memory
CPU	4	54740	_	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
	9	-	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57615	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		57602	-	0.5 Mb Memory
CPU		57603	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840		(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	•	Open
CPU	32	•	-	Open

FIGURE 12-2. OAKLAND MPS SITE # 12 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tape Controller
1/0	2	-	-	Open
1/0	3	_	-	Open
1/0	4	53000	6304	Async Extension Board
1/0	5	53000	6304	Async Extension Board
1/0	6	52990	6303	Async Front End Board
1/0	7	55930	3106	Disc Controller SCU I/F
I/0	8	55900	3106	Disc Controller Channel I/F
1/0	9	55930	3106	Disc Controller SCU I/F
I/0	10	55900	3106	Disc Controller Channel I/F
I/O		-	_	Open
1/0	12	_	-	Open
I/O		_	_	Open
I/0		_	-	Open
I/0		-	_	Open
I/0		-	-	Open
I/O		59210	6202	Byte Sync Controller
I/0		51210	3401	UI Controller
I/O		-	-	Open
1/0		53000	6304	Async Extension Board
I/0		52990	6303	Async Front End Board
1/0		58810	6204	Bit Sync Controller
1/0		53570	6203	Bit Sync Controller
1/0		53570	6203	Bit Sync Controller

FIGURE 12-3. OAKLAND MPS SITE # 12 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	Ù	(H	AS	S	IS												
		9	81 3L	XP MB TC -8	s			•	81 SL	XP MB OT	S				5 SL	SI ME OT	S				5 SL	ISI ME 01	3 TS	
DESCRIPTION			8Mb	MC	٥	30%	ı	1	8Mb	MC	ع اد	300	.5Mb	SMb.	2Mb	MCB	PU CO	3 1	.5Mb	SMb.	2Mb	MCB	PU	000
SLOT # CPU -	1	2 3	3 4	5	6 7	/ 8	9	10 1	1 12	13	4 1	5 16	17	18 1	9 20	21	222	3 24	25	262	27 28	29	30 3	31 32
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.		DISC CNTL.	DISCIF	DISC CNTL S	DISCIF	DISC CNTL.	DISCIVE	DISC CNTL.	CIU-1P	CIU-1B	22	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	1	1	6304	6304	6303	3108-1		3108-1	3108-1 [3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	j	-	_	_	1
SLOT # I/O -	1	2	۲۳	[4]	5	ر 6	7	8	L 09-	10	11	12	7	14	15	16		ر ع		₂ 0	21	22	23	24
		С	PU	PS	3		•	C	PU	PS	•	•	•	•	PU	P	•	•	•	(CPL			

^{*} UPGRADE EQUIPMENT

FIGURE 12-4. OAKLAND MPS SITE # 12 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	U		H	AS	SI	IS												
		(0	ЭP	EN	l)			(OP	EN	i)			(OP	ΈI	۱)			((01	PE	N)	
DESCRIPTION																								
SLOT # CPU -	1 :	2 3	4	5	6	7 8	9	10 1	1 12	13	4 15	5 16	17	18 1	9 20	21	22/2	324	25	26 2	7 28	29	30 3	1 32
						1/0)	CI	1A	SS	SIS	·						UIF	NA ME NCP	NT	PL/	ACE	EME	NT
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNTL	CIU-IP	CEU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BIT SYNC	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	_	1	-	_	_		1		6203/4	-	<u> </u>	-	-) -
SLOT # 1/O -	1	2	الصا	اله ۲	L 5	- 6 ₇	2	8	الما	<u>-</u> 10	=1	<u> </u> -≃	13	14	L 5	16	17	18	L 19	-8	21	22	23	24
LIPORADE FOLLIDATENT		1/	0	PS			•	L	· /O	PS				į	/O	PS						PEN		

^{*} UPGRADE EQUIPMENT

FIGURE 13-1. MEMPHIS MPS SITE # 13 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

CPU 1 57603 - 0.5 Mb Memory CPU 2 54740 - 0.5 Mb Memory CPU 3 57603 - 0.5 Mb Memory CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit	SLOT ID	PART /# NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU 2 54740 - 0.5 Mb Memory CPU 3 57603 - 0.5 Mb Memory CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit	CDII 1	57603	-	0.5 Mb Memory
CPU 3 57603 - 0.5 Mb Memory CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit			_	0.5 Mb Memory
CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit			-	0.5 Mb Memory
CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit			-	
CPU 6 54760 - (IPU) Instruction Processor Unit	-		-	(MCB) Memory Control Board
Unit			_	(IPU) Instruction Processor
	Cr C			
CPU 7 57613 - (CCD) Channel Control/DDT	CDII 7	57613	-	(CCD) Channel Control/DDT
CPU 8 Open			-	Open
CPU 9 57603 - 0.5 Mb Memory		57603	-	0.5 Mb Memory
CPU 10 54740 - 0.5 Mb Memory				0.5 Mb Memory
CPU 11 57603 - 0.5 Mb Memory		57603	-	_
CDU 12 57740 - 2.0 Mb Memory			-	2.0 Mb Memory
CDU 13 54770 - (MCB) Memory Control Board		54770	-	(MCB) Memory Control Board
CPU 14 54760 - (IPU) Instruction Processor		54760	-	(IPU) Instruction Processor
Unit	010			
CPU 15 59690 - (CCD) Channel Control/DDT	CPU 15	59690	-	(CCD) Channel Control/DDT
CPU 16 - Open			-	
CPU 17 54740 - 0.5 Mb Memory			-	_
CPU 18 54740 - 0.5 Mb Memory			-	
CPU 19 54740 - 0.5 Mb Memory			-	
CPH 20 57740 - 2.0 Mb Memory			-	
CDU 21 54770 - (MCB) Memory Control Board			-	(MCB) Memory Control Board
CPU 22 54760 - (IPU) Instruction Processor			-	(IPU) Instruction Processor
Unit				
CPU 23 54840 - (CCD) Channel Control/DDT	CPU 23	54840	-	· · · · · · · · · · · · · · · · · · ·
CPU 24 Open	CPU 24	-	-	
CPU 25 Open	CPU 25	_	-	
CPU 26 Open	CPU 26	-	-	
CPU 27 - Open	CPU 27	-	-	
CPU 28 Open	CPU 28	-	-	• · · · · · · · · · · · · · · · · · · ·
CPU 29 Open	CPU 29	-	-	
CPU 30 Open	CPU 30	-	• • •	
CPU 31 - Open	CPU 31	· -	-	
CPU 32 - Open	CPU 32	-	-	Open

FIGURE 13-2. MEMPHIS MPS SITE # 13 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/ 0	1	40880	3108-1	Disc Interface
I/O		40884	3108-1	Disc Controller
I/O		40880	3108-1	Disc Interface
I/O		40884	3108-1	Disc Controller
I/O	5	58000	3202	Tape Controller
I/ 0	6	51210	3401	UI Controller
I/0	7	40880	3108-1	Disc Interface
I/O	8	40884	3108-1	Disc Controller
I/O	9	40880	3108-1	Disc Interface
I/0		40884	3108-1	Disc Controller
I/ 0		58810	6204	Bit Sync Controller
I/O		58810	6204	Bit Sync Controller
1/0		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		53570	6203	Bit Sync Controller
1/0		-	-	Open
1/0		-	-	Open
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
1/0		53000	6304	Async Extension Board
1/0		53000	6304	Async Extension Board
1/0	24	52990	6303	Async Front End Board

FIGURE 13-3. MEMPHIS MPS SITE # 13 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CI	2 U	(СН	AS	SS	IS												_
		\$	8 S L	XP ME OT	}			,	8 SL	XP MB OT	S				5 SL	ISI ME 01 7-2	S				5 SL	ISI MI .O' 5-3	B TS	
DESCRIPTION	1	1	AWA	MC	Ы	36	3	1	- WA	MC	<u>م</u> ز	300	.5Mb	SMb	2Mb	MCB	PU	3 1	5Mb	.5Mb	2Mb	MCB	IPU	8
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	1 12	2 13	14 1	5 16	17	18 1	9 20	21	222	23/24	1 25	26	2728	29	30 3	31 3
	Ι,	<u> </u>		 T.	 T.	1/0	<u>)</u>	CI	HA I	SS	SIS	3												T
DESCRIPTION	TAPE CNTL	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL	DISC IF	DISC CNTL	DISC IF	DISC CNTL.	DISC I/F	DISC CNTL.	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	-		6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	_	_	-	-	1
SLOT # 1/0 -	[-]	٦	3	1	5	۲۳٦	لما	۳-	رما	10	בו	12	13	14	15	_[6	17	ر 18 آ	19	20	٦	22	23	24
		С	PU	PS	3		•	c	PU	PS	•	•	•	C	PU	· P:	•	•	•	(CPU		S	

FIGURE 13-4. MEMPHIS MPS SITE # 13 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	νŪ	(H	AS	S	<u>IS</u>	(\$1 ×10)	(laran sun	(Alberta)	ATTENDED OF	U.O. P. A. S.	Z-Market Agents	TEXTURE S	TOTAL CONTROL			D.111.	T
		((P	EN)			(6	ÒΡ	EN	i)			(OF	'EI	۷)				(0)	PE	N)	
DESCRIPTION											Ī													
SLOT # CPU -	1	2 3	4	5	6	7 8	9	10 1	1 12	13	14 1	5 16	17	181	9 20	21	222	23/24	25	26 2	27 28	29	30 3	31 32
		<u> </u>		i.	Ι.	1/0		Cł	1 <u>A</u>	SS	SIS							PTIC NUIF (I)	ME	NT		ACE	ME D)	NT
	Sc	l _o		ķ	iz.			CH	A	SS	SIS							UIF	ME	NT	PL	RE	D) .	Γ
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNT	GE - 150	GU-18	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BIT SYNC	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	5101	ı	1	ı	-	_	_	ı	ı	6203/4	,	,	6304	6304	6303
SLOT # 1/0 -	1	ΓN	ل صا	4	5	۔ ص	7	8	الما	10	11	12	13	14	15	16	17	18	رق	r &	21	22	23	24
		1/	0	PS			*	V	0	PS				l	/0	PS					(0)			

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FIGURE 14-1. SEATTLE MPS SITE # 14 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57740	-	2.0 Mb Memory
CPU	2	54740	-	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57601	_	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	_	(IPU) Instruction Processor
010	•			Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU		_	-	Open
CPU		57740		2.0 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57601	_	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54770	_	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
010				Unit
CPU	15	59690	-	(CCD) Channel Control/DDT
CPU		_	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	_	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
•••				Unit
CPU	23	59690	-	(CCD) Channel Control/DDT
CPU		-		Open
CPU	25	-	-	Open
CPU		-	•••	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
	30	-	-	Open
CPU		. -	-	Open
CPU		-	-	Open

FIGURE 14-2. SEATTLE MPS SITE # 14 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tano Combuellon
I/0	2	-	_	Tape Controller Open
I/0	3	-	_	
I/O	4	53000	6304	Open
I/0	5	53000	6304	Async Extension Board
I/0	6	52990	6303	Async Extension Board
I/0	7	55930	3106	Async Front End Board
I/O	8	55900	3106	Disc Controller SCU I/F
I/O	9	55930	3106	Disc Controller Channel I/F
I/0		55900	3106	Disc Controller SCU I/F
I/O		53570	6203	Disc Controller Channel I/F
I/O		-	-	Bit Sync Controller
I/O		-	_	Open
I/O		-	_	Open
I/O		-	_	Open
I/O		-	_	Open
I/0 :		59210	6202	Open
I/0		-	0202	Byte Sync Controller
I/0		_	_	Open
1/0		53000	6304	Open
1/0		52990		Async Extension Board
1/0		58810	6303	Async Front End Board
1/0		51210	6204	Bit Sync Controller
I/0 2		-	3401 -	UI Controller Open

FIGURE 14-3. SEATTLE MPS SITE # 14 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					(CP	Ų	C	H	AS	SI	S												
		S	8N 3L	AB OT	S			\$	81 3L	XP MB OT 16	S			;	51 SL	SII MB OT	S				5 SL	SI ME 01 5-3	S	
DESCRIPTION	ı	1	8Mb	MC	ع اح	SS		,	8Mb	MC	ည်း	SO	.5Mb	SMb 2Mb	2Mb	MCB	200	3	SMb.	SMb	2Mb	MCB	<u> </u>	3 ₁
SLOT # CPU -	1	2 3	4	5	6 7		9	101	1 12	131	4 15		17	18 19	20	21	222	324	25	262	27 28	29	30 3	1 32
						1/0)	CI	AF	SS	SIS		:							Webwells.				
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL	DISC IF	DISC CNTL.	DISC IF	DISC CNTL.	DISC IF	DISC CNTL.	CIU-1P	CIU-1B	80	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	_	-	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	ı	-	_	-	-
SLOT # I/O -	[-1	۲ م	L 60 J	الدما	L 5	رص ا	7	8	الما	10	11	ر <u>12</u>	Γ¤J	14	L <u>5</u> 5	[6	17	₇ 18	[9	ုဆ	لايما	ုસ	23	۲Ž
		С	PU	PS	3		•	c	PU	P\$	•	*	•	•	PU	•	•	*	•	(CPL	J P	8	

^{*} UPGRADE EQUIPMENT

FIGURE 14-4. SEATTLE MPS SITE # 14 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	טי)H	AS	S	S							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
·		(OP	ΕN	i)			(OP	EN	I)			(OP	EN	l)			(OF	E	N)	
DESCRIPTION								-rder cas															T	
SLOT # CPU -	1	2	3 4	5	6	7 8	9	101	1 12	13	14 15	5 16	17	18 11	20	21	2222	324	25	26 2	7 28	29	30 3	1 32
	<u> </u>		<u> </u>		T.	1/0) T	CI	4A	SS	SIS							·	ı					
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	E CAT	35	8 8	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	ı	1	1	1	1	1	1	,	,	-	1	_	ı	
SLOT # I/O -	[-]	2	3	1	5	٤	٤	8	9	10	12	12	13	14	15	16	17	18	19	₋ &	21	22	23	24
		l	, 10	PS					· /0	PS					vo	PS				Salara	(01	PEI	۷)	

^{*} UPGRADE EQUIPMENT

FIGURE 15-1. HONOLULU MPS SITE # 15 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	•••	-	Open
CPU	2	54740	-	0.5 Mb Memory
CPU	3	54740	-	0.5 Mb Memory
CPU	4	54740	-	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
	•			Unit
CPU	7	54840	_	(CCD) Channel Control/DDT
CPU		_	_	Open
CPU		_	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		54740	_	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	_	Open
CPU	17	-	_	Open
CPU	18	54740	-	0.5 Mb Memory
CPU	19	54740	-	0.5 Mb Memory
CPU	20	54740	•	0.5 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU	23	54840	-	(CCD) Channel Control/DDT
CPU	24	-	•••	Open
CPU	25	_	-	Open
CPU	26	-	-	Open
CPU	27	-	-	Open
CPU	28	-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	. -	Open
CPU	32	. -	-	Open

FIGURE 15-2. HONOLULU MPS SITE # 15 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	58000	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/0		-	_	Open
I/O	4	53000	6304	Async Extension Board
I/0	5	53000	6304	Async Extension Board
I/0		52990	6303	Async Front End Board
I/O	7	55930	3106	Disc Controller SCU I/F
I/O	8	55900	3106	Disc Controller Channel I/F
I/O	9	55930	3106	Disc Controller SCU I/F
I/O	10	55900	3106	Disc Controller Channel I/F
I/O	11	_	_	Open
I/O	12	-	-	Open
I/O	13	-	-	Open
I/O	14	-	_	Open
I/0	15	-	_	Open
I/ 0	16	-	_	Open
I/O	17	59210	6202	Byte Sync Controller
I/O	18	-	-	Open .
I/0	19	-	_	Open
I/0	20	53000	6304	Async Extension Board
I/O	21	52990	6303	Async Front End Board
I/0	22	58810	6204	Bit Sync Controller
1/0		-	-	Open
I/0		-	-	Open

FIGURE 15-3. HONOLULU MPS SITE # 15 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CP	U	C	H	AS	SI	S												
		S	8N 3L	(P //B OT:	S			5	81 31	KP MB OT:	S			;	51 3 L	SII MB OT -24	S				5 SL	SII MB OT	S	-
DESCRIPTION	1		8Mb	Ş	ع ا	SO	ı	1	8Mb	Ç MC	<u>.</u> C	SQ	.5Mb	SMb 2Mb	2Mb	MCB	200	-	.5Mb	.5Mb	2Mb	MCB	<u> </u>	3
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	10 1	1 12	13 1	415		17	8 19	20	21	222	324	25	26 2	7 28	29	30 3	132
						I/C		CH	-AF	SS	SIS	<u> </u>												
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IF	DISC CNTL	DISC NF	DISC CNTL	DISC NF	DISC CNTL.	DISCIF	DISC CNTL.	CIU-1P	CIU-1B	32 1	CIU-1P	CIU-18	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	1	-	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	1	-	ı	-	_
SLOT # 1/0 -	[-]	2	لرديا	4	L 5	ړ ۳٦	2	8	المح	<u>[</u> 9]	1=1	127	13	14	[<u>5</u>]	16	17	18	19	8	ر 1	22	23	24
		c	PU	P\$	5		•	c	PU	P:	•	•	•	•	PU	P	s	•	•		CPU) P	·\$	

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FIGURE 15-4. HONOLULU MPS SITE # 15 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	Ų		H	AS	S	S			(MOC 200M									
		((OP	E۱	i)			(OP	ΕN	i)			(OP	Έl	4)			(OF	PΕ	N)	
DESCRIPTION					T	T																	T	T
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	10 1	1 12	13	4 15	5 16	17	18 1	9 20	21	222	324	25	26 2	7 28	29	30 3	1132
			.	··········	a toda godina	1/0)	CI	<u>IA</u>	SS	SIS		andreasy many			Characteristics (1)	Question of the second			-		•		
DESCRIPTION	BYTE SYNC	BIT SYNC		ASYNC EXT	ASYNC EXT	Т.	Π						z	z	Z	Z	z	z	z	z	z	z	z	z
	BYI	듑	8	ASY	ASY	\S\	TA	LI CMI	GW-PP	CEU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	-	ŀ			_		1		_	_	1	1	1	1
SLOT # I/O -	1	۲2	3	1	5	ક	٤	8	اوما	<u>-</u> 2	11	- 23	Loj	r 4	15	- 6	17	18	٦	<u>-</u> 8	ر ا	22	23	24
		l	, 0	PS		2	•	l	· /O	Ps				Į	70	PS					(OF			

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FIGURE 16-1. SALT LAKE CITY MPS SITE # 16 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	_	0.5 Mb Memory
CPU	2	54740	-	0.5 Mb Memory
CPU	3	576 03	-	0.5 Mb Memory
CPU	4	5774 0	_	2.0 Mb Memory
CPU	5	5477 0	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	_	-	Open
CPU	9	57601	-	0.5 Mb Memory
CPU	10	54740	-	0.5 Mb Memory
CPU	11	57603	-	0.5 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		59690	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	**	Open
CPU		-	-	Open
CPU		***	-	Open
CPU		-		Open
CPU		. •••	-	Open
CPU	32	-	-	Open

FIGURE 16-2. SALT LAKE CITY MPS SITE # 16 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/ 0	1	58000	3202	Tape Controller
I/O		51210	3401	UI Controller
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
1/0		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
Í/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		53570	6203	Bit Sync Controller
1/0		-	===	Open
1/0		-	•	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		-	-	Open
I/O		59210	6202	Byte Sync Controller
I/O		-	40	Open
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
I/O		-	-	Open
I/O		53570	6203	Bit Sync Controller

FIGURE 16-3. SALT LAKE CITY MPS SITE # 16 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					C	P)	U	C	H/	\S	SI	<u>S</u>												_
			TX 8M LC	IB TS	6			S	TX 8M LC 9-	IB OTS	6				5N	AB OT				,	51 SL	SII MB OT -3	S	
DESCRIPTION		1 1	8Mb	Ş 2	<u> </u>	SQ	1	' '	8Mb	Ş Q		SQ	SMb.	2Mb	2Mb	MCB	2 G		.5Mb	OMC:	2Mb	MCB	200	-
SLOT # CPU -	1	2 3	4	5	5 7	8	9 1	0 11	12		4 15		17 1	8 19	20	21	222	3 24	25	26 2	728	293	30 3	1 32
						I/C)	Cł	ÍΑ	SS	is													
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IF	DISC CNTL.	DISC IF	DISC CNTL.	DISC IF	DISC CNTL.	DISC IF	DISC CNTL	CIU-1P	CN-18	100	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	1		6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	_		-	1	_
SLOT # I/O -	1	2	ار س	[4]	5	["]	7	8	الما	10	=	12	13	14	15	16	17	18	19	20	21	22	23	24
		C	;PU	P:	\$			•	• PU	P!	.	•	•	•	• CPl	• J P	s	•	•		CPI	n t	PS	

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FIGURE 16-4. SALT LAKE CITY MPS SITE # 16 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

				(CP	U	C	H	AS	SI	S												
	((OP	ΈN	I)			((ΟP	ΕN	i)			(OP	Έ۱	1)			(OF	PEI	N)	
DESCRIPTION																							
SLOT # CPU -	1 2	3 4	5	6 7	8	9 1	0 1	1 12	13 1	4 15	16	17	8 19	9 20	21	222	3 24	25	26 2	7 28	29	30 3	132
			T.	Ĭ	I/C)	Cŀ	1A	SS	SIS			and the state of				UIF	ME	NT			ME D)	NT
DESCRIPTION	BYTE SYNC	10 Si	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNTL	CEU-IP	CIU - IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BIT SYNC	OPEN	OPEN	OPEN	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6105	6304	6304	6303	3207	3401	6101	6101	-	_	-	-	ī	1	-	1	6203/4	1	_	П	6304	6303
SLOT # I/O -	1	2 3	[1	5	ြ ၅	7	ر ھ	رها	الي	=	<u>124</u>	Lق	- 2	1 5	16	L۶	18	19	۲8	21 21	22	23	24
		1/0	PS			•	L	· /0	PS				1	/O							PEN		

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FIGURE 17-1. DENVER MPS SITE # 17 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	54740	-	0.5 Mb Memory
CPU	2	54740	-	0.5 Mb Memory
CPU		54740	_	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	6	54760	_	(IPU) Instruction Processor
				Ùnit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	_	_	Open
CPU	9	54740	_	0.5 Mb Memory
CPU	10	54740	_	0.5 Mb Memory
CPU	11	54740	_	0.5 Mb Memory
CPU	12	57740		2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	_	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	54740	-	0.5 Mb Memory
CPU	18	54740	-	0.5 Mb Memory
CPU	19	54740	-	0.5 Mb Memory
CPU	20	57740	-	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU	23	54840	-	(CCD) Channel Control/DDT
CPU	24	-		Open
CPU	25	-	-	Open
CPU	26	-	-	Open
CPU	27	-	-	Open
CPU		-	-	Open
CPU	29	-	-	Open
CPU	30	-	-	Open
CPU	31	-	-	Open
CPU	32	.	-	Open

FIGURE 17-2. DENVER MPS SITE # 17 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tape Controller
I/0		-	-	Open
I/0	3	-	-	Open
I/O		53000	6304	Async Extension Board
I/0	5	53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
1/0		55930	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
1/0		55930	3106	Disc Controller SCU I/F
I/0		55900	3106	Disc Controller Channel I/F
I/O		53570	6203	Bit Sync Controller
I/O		53570	6203	Bit Sync Controller
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		-	-	Open
1/0		59210	6202	Byte Sync Controller
1/0		-	-	Open
1/0		51210	3401	UI Controller
I/O		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
1/0		58810	6204	Bit Sync Controller
I/ 0		-	-	Open _
1/0	24	-	-	Open

FIGURE 17-3. DENVER MPS SITE # 17 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					C	PI	U	CI	HA	S	SIS	<u> </u>												4
		S	TX 8N LC	IB)TS	\$		-	S	TX BM LO 9-1	B TS	}			S							NS 5N 6L(25-	AB OT:		
DESCRIPTION	1	-	8Mb	¥C	ျွ	SO				⊋ <u></u> ⊒	4	SQ	4	1	Н	-	1	Н	5Mb	-	2Mb	╬	╀	┼┤
SLOT # CPU -	1	2 3	4	5 (3 7	8	9 1	0 11		13 14		16	171	В 19	20	212	223	24	25 2	627	28	29 3	0 3	1 32
						I/C)	Cŀ	ΙA	SS	IS					7								
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.		7	DISC VF	1	DISC IF	DISC CNTL.	DISC VF	DISC CNTL.	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	T	1	6304	6304	6303	-		3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	8101	6101		8101	6101	-	1	-	-	-
SLOT # I/O -	1	7	3	1	5	ြိ	Z	8	رها	10	1	12	13	14	15	16	17	18	19	20	21	22	23	24
			CPI	J P	s			•	PU	P	•		•	•	CPI	· J P	·	•	•		CP	ו ט	PS	

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FIGURE 17-4. DENVER MPS SITE # 17 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CP	U	C	H	AS	SI	S									****			
		(0	PΙ	EN	1)			((ÒΡ	EN)			(OP	ΕN	1)			(OF	E	4)	
DESCRIPTION													1174 TATE (***	a a p					CALLED T					
SLOT # CPU -	1	2 3	4	5	6 7	8	9	0 1	1 12	13 1	4 15	16	17	8 19	20	21	22/2	324	25	26 2	7 28	29	30 3	132
	······································					I/C)	Cŀ	AF	SS	IS							UIF	NA ME VCP	NT	PLA	CE		NT
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICHII	GU-P	GU-B	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BITSYNC	OPEN	OPEN	OPEN	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	_	ì	1	1	1	1	_	1	6203/4	ì	1	ı	6304	6303
SLOT # I/O -	[-]	2	رص _ا	[4]	5	ြဗျ	Z	8	٩	10	=1	ر در	13	14	15	16	17	18	19	<u>2</u>	21	22	23	24
		l/	· ′0	PS			•		· /0	PS					VO	PS					(01	>E1	۷)	

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FIGURE 18-1. MINNEAPOLIS MPS SITE # 18 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57603	-	0.5 Mb Memory
CPU	2	57601	-	0.5 Mb Memory
CPU	3	54740	_	0.5 Mb Memory
CPU	4	57740	_	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	_	(IPU) Instruction Processor
CI U	•			<u> </u>
CPU	7	54840	_	(CCD) Channel Control/DDT
CPU		_	_	Open
CPU	9	57602	_	0.5 Mb Memory
CPU	_	57603	_	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	_	2.0 Mb Memory
CPU		54770	_	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
CFO	7.4	54700		Unit
CPU	15	57613	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
920		-		Unit
CPU	23	54840	_	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	_	Open
CPU		-	_	Open
CPU		_		Open
CPU		· _	-	Open
CPU		-	_	Open

FIGURE 18-2. MINNEAPOLIS MPS SITE # 18 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/‡	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	52020	3202	Tape Controller
1/0	2	51210	3401	UI Controller
1/0	3	58810	6204	Bit Sync Controller
I/0		53000	6304	Async Extension Board
1/0	5	53000	6304	Async Extension Board
I/0		52990	6303	Async Front End Board
I/0	7	55930	3106	Disc Controller SCU I/F
I/O	8	55900	3106	Disc Controller Channel I/F
1/0	9	55930	3106	Disc Controller SCU I/F
1/0	10	55900	3106	Disc Controller Channel I/F
1/0	11	53570	6203	Bit Sync Controller
I/0	12	-	-	Open
1/0	13	-	-	Open
1/0	14	53000	6304	Async Extension Board
1/0	15	52990	6303	Async Front End Board
1/0	16	-	420	Open
1/0	17	59210	6202	Byte Sync Controller
1/0	18	-	-	Open
1/0	19	-	-	Open
1/0	20	53000	6304	Async Extension Board
1/0	21	52990	6303	Async Front End Board
1/0	22	58810	6204	Bit Sync Controller
I/0	23	-	-	Open
1/0	24	58810	6204	Bit Sync Controller

FIGURE 18-3. MINNEAPOLIS MPS SITE # 18 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	U	C	H	AS	SI	S												
		S	8N 3L(KP MB OT:	s			•	81 3 L 6	XP MB OT				;	5! SL	SII MB OT	S				5 SL	SI ME OT	S	
DESCRIPTION	!	1 1	8Mb	W C	ع ا	Sos	1	1	8Mb	ΨC	ع د	SS	SMb.	5Mb	2Mb	MCB	26	3	.5Mb	.5Mb	2Mb	MCB	PO SOS	- F
SLOT # CPU -	1	2 3	4	5	6 7	8	9	10 1	1 12	13	4 15	5 16	17	18 19	20	21	222	324	25	262	728	29	30 3	11 32
	نے آ			t	Γ. Ι	I/C		Γ,	ΑF	SS	SIS													
DESCRIPTION	TAPE CNTL	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNT	DISC NE	DISC CNT	DISC NE	DISC CNTL	DISC NE	DISC CNTL	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	ļ	ı	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	_	1.	1	I	1
SLOT # 1/O -	[-]	٦ م	L. 2.	[4]	5	ر ۳٦	۲۰٦	8	الصا	10	1	ر ع	<u>[3</u>	14	لقعا	_[6	17	رق ر	رق	₋ کو	٦٠	22	23	24
* HOCDADE EQUIDAENT		C	PU	PS	}		•	c	PU	PS	•	•	•	Ċ	PU	P:	s	•	•	(CPU	ı P	s	

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FIGURE 18-4. MINNEAPOLIS MPS SITE # 18 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

		, 01.			(<u> </u>	U	C	H	15	SI	S											,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		(0	PI	ΕN)			(0	PI	EN)			(6	ЭP	ΕN	1)			(OF	EN	1)	
DESCRIPTION																								
SLOT # CPU -	1 2	2 3	4	5	5 7	8	9 1	0 11	12	13 1	4 15	16	17	8 19	20	21/2	22 2	3 24	25	26 2	28	293	30 3	132
						1/C		C+	1A	SS	SIS	The Court of the C		es norsk				UIF	ME	L - E	PLA	CE	Γ.	
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E	TAPE CNT	UI CNT	on-100	35 25 26	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BIT SYNC	BIT SYNC	OPEN	OPEN	ASYNC EXT	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	ı	ı	1	1	1	1	1	1	6203/4	6203/4	ı	1	6304	6303
SLOT # 1/O -	1	٦2	ال	4	5	6	٢	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		l,	· /O	PS				Î	/0	PS				2:	VO	PS	regulator ion	of S ave s			(0)	PEI	N)	

^{*} UPGRADE EQUIPMENT

FIGURE 19-1. INDIANAPOLIS MPS SITE # 19 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57740	-	2.0 Mb Memory
CPU	2	54740	-	0.5 Mb Memory
CPU	3	57601	-	0.5 Mb Memory
CPU	4	57603	-	0.5 Mb Memory
CPU	5	54770	_	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	57740	-	2.0 Mb Memory
CPU	10	57603	-	0.5 Mb Memory
CPU	11	57603	_	0.5 Mb Memory
CPU	12	57603	_	0.5 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	57740	-	2.0 Mb Memory
CPU	18	57601	-	0.5 Mb Memory
CPU	19	57603	-	0.5 Mb Memory
CPU	20	57603	-	0.5 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU	23	57612	-	(CCD) Channel Control/DDT
CPU	24	_	-	Open
CPU	25	-	-	Open
CPU	26	-	-	Open
CPU		-	-	Open
CPU	28	-	-	Open
CPU	29	-	-	Open
CPU	30	-	-	Open
CPU	31	-	-	Open
CPU	32	· -	-	Open

FIGURE 19-2. INDIANAPOLIS MPS SITE # 19 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	Product Ident	PRODUCT DESCRIPTION
I/O	1	58000	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O	3	•	•	Open
I/O	4	53000	6304	Async Extension Board
I/0	5	53000	6304	Async Extension Board
I/0	6	52990	6303	Async Front End Board
I/0	7	55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/0	9	55930	3106	Disc Controller SCU I/F
I/0	10	55900	3106	Disc Controller Channel I/F
I/O	11	53570	6203	Bit Sync Controller
I/O		-	•••	Open
I/ 0		(41)	•	Open
I/0		—	65	Open
1/0		-	623	Open
1/0		-	•	o pen
1/0		59210	6202	Byte Sync Controller
1/0		-	600	Open
1/0				Open
1/0		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
I/O		-	•	o pen
1/0	24	-	6 23	open

FIGURE 19-3. INDIANAPOLIS MPS SITE # 19 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					(P	U	С	H	AS	SI	S												
			TX 8N LC	IB OTS	3			S	T) 8k 6L(9-	AB OT:	S				51 SL(SII MB OT:				;	51 SL	SII MB OT	S	
DESCRIPTION			8Mb	Q Q	<u>.</u> 8	SQ	1		8Mb	Q Q	ည်	SQ	SMb.	OMC.	2Mb	MCB	2 5		SMb.	SMb 2Mb	2Mb	MCB	<u> </u>	3'
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 11	12	13 1	4 15		17	8 19	20	212	222	324	25	262		29	30 3	1 32
	<u> </u>]		E		1/C)		1A	SS	is													
DESCRIPTION	TAPE CNTL	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NE	DISC CNT	DISCIF	DISC CNTI	DISCIF	DISC CNTL	DISC NE	DISC CNTL	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	1	1	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	_	1	-	1	-
SLOT # I/O -	[2	L ω ₁	4	5	۳٦)	7	8	الصا	10	11	12	13	14	[₅	16	17	18	19	20	21	22	23	24
		C	PU	P:	5		•	Ċ	PU	* P:	\$	•	•	•	• CPU	P	s	•	•	,	CPI	IJ F	.	

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FIGURE 19-4. INDIANAPOLIS MPS SITE # 19 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					(P	U	C	H/	1 S	SI	S												\Box
		(C	Pl	EN)			((P	ΕN)			(()P	EN	1)	•		(OP	EN	ł)	
DESCRIPTION																								
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 11	12	13 1	4 15	16	171	8 19	20	212	222	324	25	26 2	728	29	3 03	132
					and the second	I/C		CH	1A	SS	SIS		1600; 1864; 1700	S.W. Co.	and the state of t	•			· · · · · · · · · · · · · · · · · · ·	المراجع والمراجع		tectropist sale		
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT		ASYNC F.E.	TAPE CNTL	UICNTL	CIO-IP	CIU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	-	_	_		1	-	-	1	,	1		1	+	1
SLOT # 1/O -	1	2	3	1	5	6	٢	8	الصا	10	11	12	<u>[3</u>	14	15	16	17	18	19	20	21	22	23	24
		1.	* /O	PS				ı	/0	PS	25				/0	PS	}				(01	PEI	۷)	

^{*} UPGRADE EQUIPMENT

FIGURE 20-1. CLEVELAND MPS SITE # 20 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	-	0.5 Mb Memory
CPU	2	54740	-	0.5 Mb Memory
CPU	3	57603	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	_	(IPU) Instruction Processor
				Ùnit
CPU	7	57613	_	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	57603	-	0.5 Mb Memory
CPU	10	57603	-	0.5 Mb Memory
CPU	11	57602	-	0.5 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU	15	59690	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU		57603	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57602	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU			-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU			***	Open
CPU	32	-	-	Open

FIGURE 20-2. CLEVELAND MPS SITE # 20 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	52020	3202	Tape Controller
1/0		72020	-	Open
1/0		_	_	Open
	4	53000	6304	Async Extension Board
1/0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		55930 55930	3106	Disc Controller SCU I/F
I/0		55900	3106	Disc Controller Channel I/F
1/0			3106	Disc Controller SCU I/F
1/0		55930		Disc Controller Channel I/F
1/0		55900	3106	
I/O		53570	6203	Bit Sync Controller
1/0		51210	3401	UI Controller
I/ 0		-	-	Open
I/O	14	-	-	Open
1/0	15	-	-	Open
I/O	16	-	-	Open
I/O		59210	6202	Byte Sync Controller
I/O		-	-	Open
I/O		-	_	Open
Í/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
1/0		58810	6204	Bit Sync Controller
I/O		-	-	Open _
I/O		-	-	Open

FIGURE 20-3. CLEVELAND MPS SITE # 20 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					(CP	U	С	H	AS	SI	S												
			TX 8N LC	1B	S			S			S			\$;	5! SL	SII MB OT	S	
DESCRIPTION	-	,	8Mb	Ş.	<u> </u>	SQ	-	, ,	8Mb	¥C	<u> </u>	SQ	SMb.	OMC.	2Mb	MCB	200	-	SMb.	SMb SMb	2Mb	MCB	200	3
SLOT # CPU -	1	2 3	4	_	6 7		9	0 1 1	12		4 15	4	171	8 19	20	21	22/2	324	25	262		29	30 3	1 32
	٦			<u> </u>	ĸ	I/C		CH E	1A		SIS	,		<u></u>										
DESCRIPTION	TAPE CNTL	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NE	DISC CNTI	JA OSIG	DISC CNTL	DISC NE	DISC CNTL	DISC NF	DISC CNTL	CIU-1P	CIU-1B	8	CIU-1P	CIU-18	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	-		6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-		-	l	ı
SLOT # I/O -	1	2	L 63	- 4	5	روع	2	8	رما	10	12	12	13	[4	Լոյ	16	17	رڅے	اوا	₋ &	ليا	ᄱ	ង។	24
		c	PU	P:	5			C	PU	P:	•	•	•	•	CPU	P	s		•	(CPI	JF	' S	

^{*} UPGRADE EQUIPMENT

FIGURE 20-4. CLEVELAND MPS SITE # 20 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CI	νU		H	AS	S	IS												
		(4	OP	ΈN	1)			(OP	ΈN	I)			(OF	ΈI	۷)				(01	PE	N)	
DESCRIPTION																								T
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	10 1	1 12	13	14 1	5 16	17	181	9 20	21	222	324	25	26 7	7 26	29	30 3	31 32
	S _C			ķ	×	1/(Π	CI	1A	SS	SIS													
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	U CANT	œn-ib	QU.B	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	_	ł	_	-	1	+	-	_	-	_	1	1	1	-
SLOT # 1/0 -	1	72	۲۰۰	الها	Lo	رق	٤	8	ادم	[2]	11	12	13	14	L 15	16	17	F 257	19	20	27	22	23	24
		V	•	PS			•	L	•	PS				ı	/0	PS						PEN		

^{*} UPGRADE EQUIPMENT

FIGURE 21-1. WASHINGTON (LEESBURG) MPS SITE # 21 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/‡	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	-	0.5 Mb Memory
CPU	2	57603	-	0.5 Mb Memory
CPU	3	57603	-	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	_	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	54840	_	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		57603	-	0.5 Mb Memory
CPU		57602	-	0.5 Mb Memory
CPU	11	57603	-	0.5 Mb Memory
CPU	12	57740	_	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	•	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	57603	_	0.5 Mb Memory
CPU	18	57603		0.5 Mb Memory
CPU	19	57603	-	0.5 Mb Memory
CPU	20	57740	•	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU	23	54840	-	(CCD) Channel Control/DDT
CPU	24	-	-	Open
CPU	25	-	-	Open
CPU	26	-	-	Open
CPU	27	-	-	Open
CPU	28	-	-	Open
CPU	29	-	-	Open
CPU	30	-	_	Open
CPU	31		-	Open
CPU	32	-	-	Open

FIGURE 21-2. WASHINGTON (LEESBURG) MPS SITE # 21 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	58000	3202	Tape Controller
1/0	2	-	-	Open
1/0	3	-	-	Open
1/0	4	53000	6304	Async Extension Board
I/0	5	53000	6304	Async Extension Board
I/0	6	52990	6303	Async Front End Board
I/O		55820	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O	9	55820	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
1/0	11	53570	6203	Bit Sync Controller
1/0	12	-	-	Open -
1/0	13	-	-	Open
1/0	14	-	-	Open
1/0	15	-	-	Open
1/0	16	51210	3401	UI Controller
1/0	17	59210	6202	Byte Sync Controller
1/0	18	-	-	Open
1/0	19	-	-	Open
1/0	20	53000	6304	Async Extension Board
I/O	21	52990	6303	Async Front End Board
1/0	22	58810	6204	Bit Sync Controller
1/0	23	-	-	0pen
1/0	24	-	-	Open

FIGURE 21-3. WASHINGTON (LEESBURG) MPS SITE # 21 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CP	U	C	H	AS	SI	S												
		8	8N 3L	(P //B OT:	S			5	8N 3L	XP MB OT 16	S			•	51 SL	SII MB OT	'S				5 SL	SI ME 01 5-3	S	
DESCRIPTION	1	1	8Mb	MC	<u>a</u> (2	SOS	1	1	8Mb	MC	<u>_</u>	os	.5Mb	SMb	2Mb	MCB	DG U	331	SMb.	SMb	2Mb	MCB	PU BSS	-
SLOT # CPU -	1	2 3	3 4	5	6 7	8	9 1	10 1	1 12	13	4 1!	5 16	17	18 11	20	21	222	3 24	25	262	728	29	30	1 32
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISCUE	DISC CNTL.	DISC IF A	DISC CNTL S	DISC IF	DISC CNTL.	DISCIVE	DISC CNTL.	CIU-1P	CIU-1B	00	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	l.	i	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101			_	1	
SLOT # I/O -	1	2	3	اٍ ∀یا	L 5	ر 6	5	8	L @_	10	L 11	12	13	14	15	16	17	18	L 19	20	21	722	23	24
* LIPGRADE FOLUPMENT		С	PU	PS	•		*	C	PU	P	*	*	*	•	PU	P	•	*	•		CPL			

^{*} UPGRADE EQUIPMENT

FIGURE 21-4. WASHINGTON (LEESBURG) MPS SITE # 21 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	U	C	H	AS	SI	S												
		(6	OP	EN	I)			(OP	EN	I)			(OP	ΈN	I)			(OF	PΕΙ	٧)	
DESCRIPTION																								
SLOT # CPU -	1	2 3	3 4	5	6	7 8	9	10 1	1 12	13	4 15	16	17	18 19	9 20	21	222	324	25	26 2	7 28	29	30 3	1 32
	,					1/0		CI	HA	SS	SIS	<u> </u>		***		-						·		
DESCRIPTION	BYTE SYNC	BIT SYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.		UI CNTL	CIU-IP	GIU-IB	OPEN		OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	-	1	1	-	ı	1	1		,	-		ı	1	1
SLOT # I/O -	F-7	2	3	[4]	5	6	5	8	٦٥-	10	두	r ² 7	13	14	L <u>5</u> 7	16	17	18	19	20	21	무입니	23	24
		1.	, 0	PS			•	ı	· /O	PS					VO					1	(01			

^{*} UPGRADE EQUIPMENT

FIGURE 22-1. NEW YORK MPS SITE # 22 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

CPU 1 57603 - 0.5 Mb Memory CPU 2 57603 - 0.5 Mb Memory CPU 3 57601 - 0.5 Mb Memory CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open CPU 31 - Open CPU 31 - Open CPU 32 - Open CPU 31 - Open CPU 31 - Open CPU 31 - Open CPU 32 - Open CPU 31 - Open CPU 32 - Open	SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU 2 57603 - 0.5 Mb Memory CPU 3 57601 - 0.5 Mb Memory CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 - Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open		, "		_	
CPU 3 57601 - 0.5 Mb Memory CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 - Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open			57603	-	0.5 Mb Memory
CPU 4 57740 - 2.0 Mb Memory CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 27 - Open CPU 27 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open				-	
CPU 5 54770 - (MCB) Memory Control Board CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT Open CPU 8 Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open			57601	-	0.5 Mb Memory
CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open			57740	-	
CPU 6 54760 - (IPU) Instruction Processor Unit CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 19 577603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open				-	(MCB) Memory Control Board
CPU 7 59690 - (CCD) Channel Control/DDT CPU 8 Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open	CPU	6	54760	-	(IPU) Instruction Processor
CPU 8 - Open CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open					Unit
CPU 9 57602 - 0.5 Mb Memory CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open			59690	-	(CCD) Channel Control/DDT
CPU 10 57603 - 0.5 Mb Memory CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open				-	
CPU 11 57603 - 0.5 Mb Memory CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 27 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open				-	
CPU 12 57740 - 2.0 Mb Memory CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open			57603	-	0.5 Mb Memory
CPU 13 54770 - (MCB) Memory Control Board CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 - Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open			57603	-	
CPU 14 54760 - (IPU) Instruction Processor Unit CPU 15 59690 - (CCD) Channel Control/DDT CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 29 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open				-	
Unit CPU 15				_	(MCB) Memory Control Board
CPU 15	CPU	14	54760	-	(IPU) Instruction Processor
CPU 16 Open CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open CPU 31 - Open					
CPU 17 54740 - 0.5 Mb Memory CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open CPU 31 - Open			59690	-	(CCD) Channel Control/DDT
CPU 18 57603 - 0.5 Mb Memory CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 30 - Open CPU 31 - Open			-	_	
CPU 19 57603 - 0.5 Mb Memory CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open CPU 31 - Open				-	
CPU 20 57740 - 2.0 Mb Memory CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open				-	
CPU 21 54770 - (MCB) Memory Control Board CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open					
CPU 22 54760 - (IPU) Instruction Processor Unit CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 - Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open				-	
CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 Open CPU 25 - Open CPU 26 - Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open				-	(MCB) Memory Control Board
CPU 23 54840 - (CCD) Channel Control/DDT CPU 24 Open CPU 25 Open CPU 26 Open CPU 27 - Open CPU 28 Open CPU 29 - Open CPU 30 - Open CPU 31 - Open	CPU	22	54760	-	
CPU 24 Open CPU 25 Open CPU 26 Open CPU 27 - Open CPU 28 Open CPU 29 Open CPU 30 Open CPU 31 - Open					Unit
CPU 25 Open CPU 26 Open CPU 27 - Open CPU 28 - Open CPU 29 - Open CPU 30 - Open CPU 31 - Open			54840	-	(CCD) Channel Control/DDT
CPU 26 Open CPU 27 Open CPU 28 Open CPU 29 Open CPU 30 Open CPU 31 - Open			-	-	
CPU 27 Open CPU 28 Open CPU 29 Open CPU 30 Open CPU 31 - Open			-	-	
CPU 28 Open CPU 29 Open CPU 30 Open CPU 31 - Open			-	-	Open
CPU 29 Open CPU 30 Open CPU 31 - Open			-	-	Open -
CPU 30 Open CPU 31 Open			-	-	
CPU 31 Open			_	-	
· · · · · · · · · · · · · · · · · · ·			-		0pen
CPU 32 - Open				-	-
	CPU	32	-	-	Open

FIGURE 22-2. NEW YORK MPS SITE # 22 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tape Controller
1/0		51210	3401	UI Controller
1/0		-	3401	Open
1/0		53000	6304	Async Extension Board
1/0		53000	6304	Async Extension Board
1/0		52990	6303	
I/0		55930	3106	Async Front End Board Disc Controller SCU I/F
1/0		55900	3106	
1/0		55930	3106	Disc Controller Channel I/F
1/0		55900		Disc Controller SCU I/F
1/0		22300	3106	Disc Controller Channel I/F
I/O		_	-	Open
•			6 22	Open
I/O		-	-	Open
1/0		•	-	Open
1/0		-	-	Open
I/O			-	Open
1/0		55840	6202	Byte Sync Controller
I/O		59210	6202	Byte Sync Controller
I/O		-	-	Open
1/0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		58810	6204	Bit Sync Controller
1/0		-	-	Open
1/0	24	53570	6203	Bit Sync Controller

FIGURE 22-3. NEW YORK MPS SITE # 22 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

				C	PU	С	H	AS	SI	S												
	S	TX 8N 8LC 1-	MB OTS	;		S	8N 3L	KP MB OT:	S			Ş	NS 5N SLC 17	AB OT:					5 SL	SI ME OT	S	
DESCRIPTION	- 1	8Mb	MC P	္ပင္ပ	70		8Mb	WC P	_ ဗ	SO	SMb.	SMb SMb	2Mb	MCB	200		aMS.	.5Mb	2Mb	MCB	PO CO	_ _
SLOT # CPU -	1 2 3	4	5 6	7	8 9	10 1	1 12	13 1	4 15	16	17 1	8 19	20	212	222	3 24	25	262	728	29	30 3	1 32
				1/	0	CI	ΗA	SS	SIS)												
DESCRIPTION	TAPE CNTL. OPEN	OPEN	ASYNC EXT	ASYNC EXT	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	CIU-1P	CIU-1B	20	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	_	6304	6304	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	ı	-		1	-
SLOT # I/O -	1 2	ل م]	74	5 6	7	8	ال مح	10	12	12	[3]	14	15	16	17	1 8	L 9	20	اديا	22	23	24
		:PU	PS		*	·	* PU	P:	\$	•	•	•	* PU	P:	s	•	•	ļ	CPI	JF	es	

^{*} UPGRADE EQUIPMENT

FIGURE 22-4. NEW YORK MPS SITE # 22 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	U	C	H	AS	S	IS												
		((ΟP	EN	I)			(ΟP	ΕN	I)			(OP	E	۷)				(OF	E	N)	
DESCRIPTION																								
SLOT # CPU -	1	2 3	3 4	5	6 7	7 8	9	101	1 12	13	4 15	5 16	17	18 19	9 20	21	222	324	25	26 2	7 28	29	30 3	31 32
						I/C)	Cŀ	ΑF	SS	SIS	·				wine was a		UIF	ME	L - E NT PRE	PLA	ACE	:ME D)	NT .
DESCRIPTION	BYTE SYNC	BITSYNC	3	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UI CNT.	CIU-IP	CIU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	3401	6101	6101	_	_		_	-		1	,	1		6202		1	-
SLOT # I/O -	[1]	2	ا ري	4	5	6	Z	8	۲۰۰۱	احَا	12	ال عا	13	14	15	- 16 16	1 7	18	19	20	21	22	23	24
		I/	* '0	PS			*	L	· /O	PS				i	/0						(01		*	

^{*} UPGRADE EQUIPMENT

FIGURE 23-1. BOSTON MPS SITE # 23 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57603	-	0.5 Mb Memory
CPU		57601	_	0.5 Mb Memory
CPU		57601	_	0.5 Mb Memory
CPU		57740	_	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
				<u> </u>
CPU	7	57612	-	(CCD) Channel Control/DDT
CPU		-	_	Open
CPU		57603	-	0.5 Mb Memory
CPU		57602	_	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	_	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
0.0				Ünit
CPU	15	59690	_	(CCD) Channel Control/DDT
CPU		_	-	Open
CPU		57603	-	0.5 Mb Memory
CPU		57602	_	0.5 Mb Memory
CPU		54740	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770		(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
				Unit
CPU	23	54840	-	(CCD) Channel Control/DDT
CPU		· •	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU			-	Open
CPU		•	-	Open

FIGURE 23-2. BOSTON MPS SITE # 23 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	58000	3202	Tape Controller
I/O		51210	3401	UI Controller
I/O		-	5401	Open
I/O	4	53000	6304	Async Extension Board
I/O	5	53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		-	-	Open
I/O		-	** **	Open
I/O		-	_	Open
I/O		53000	6304	Async Extension Board
I/0	15	52990	6303	Async Front End Board
I/0	16	-	-	Open
I/O		59210	6202	Byte Sync Controller
1/0	18	-	-	Open
I/0	19	-	-	Open
I/0	20	53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
I/O	22	53570	6203	Bit Sync Controller
I/O		53570	6203	Bit Sync Controller
I/O		•	•	Open Concroller

FIGURE 23-3. BOSTON MPS SITE # 23 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CP	U	C	H.	AS	SI	S												
	! !	S	8N 3L		S			\$	8N SL(XP MB OT:				\$	5! 3L	SII MB OT -2	S			;	5 SL	S!! MB OT 5-3	S	
DESCRIPTION	1	1 1	8Mb	WC P	ع ا	SQ		1	8Mb	WC	ည်	SQ	.5Mb	-5Mb	2Mb	MCB	02	3	SMb.	.5Mb	2Mb	MCB	<u> </u>	3 :
SLOT # CPU -	1	2 3	3 4	5	6 7	8	9 1	10 1	1 12	13 1	4 15	16	17	18 19	20	21	222	324	25	262	7 28	29	30 3	1 32
						I/C	<u>)</u>	CI	AF	SS	SIS												_	
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC IF	DISC CNTL.	DISCIF	DISC CNTL.	DISC IF	DISC CNTL.	DISC I/F	DISC CNTL.	CIU-1P	CIU-1B	221	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202	-		6304	6304	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	Ι	1	1	-	ļ	
SLOT # I/O -	[-]	2	[3]	[4]	5	[ص]	7	8	الم	10	11	۳٦٦	L3	14	القا	₁₆	L 17	18	19	20	21	22	23	24
		С	:PU	P\$	>		*	C	; PU	P	\$	•	•	*	* CPU	· I P	s	•	•		CPL			

^{*} UPGRADE EQUIPMENT

FIGURE 23-4. BOSTON MPS SITE # 23 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

		·				CI	Pυ		СН	A	SS	IS						Victoria de la constanta de la	Restorations		7. 4 () ()			
		(OF	ΈI	4)			(OF	PΕΙ	۷)				(OF	PE	N)				(0	PE	N)	
DESCRIPTION																		Ì						T
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	1 12	13	141	5 16	17	18 1	9 20	21	222	23 24	4 25	26	27 28	3 29	30	31 32
	OPTIONAL - EXTRA EQUIPMENT PLACEMEN (NCP REQUIRED)														:NT									
	I/O CHASSIS (NCP REQUIRED)														:NT									
DESCRIPTION	BYTE SYN	BYTE SYNC BIT SYNC ICC ASYNC EXT ASYNC EXT ASYNC EXT							CIU-IP	SD-1B	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	ASYNC EXT	ASYNC F.E.
PRODUCT IDENT	6202	4							6101	6101	1	1	-	-	ŀ	-	1	ı	ı	ı	1	-	6304	6303
SLOT # I/O -	[-]	1 2 3 4 5 6							LoJ	<u>-</u> [2]	11	12	L 13	14	ا 15	16	17	18	19	۲-20	21	22		24
UPGRADE EQUIPMENT		1/	0				*	V	•	PS				l	/0						(OF			

UPGRADE EQUIPMENT

FIGURE 24-1. FAA HEADQUARTERS MPS SITE # 24 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	_	-	Open
CPU	2	-	-	Open
CPU	3	41870	_	4.0 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	_	(IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9		-	Open
CPU	10	-	-	Open
CPU	11	41870	•	4.0 Mb Memory
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	-	-	Open
CPU	18	-	-	Open
CPU	19	41870	-	4.0 Mb Memory
CPU	20	57740	-	2.0 Mb Memory
CPU	21	54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
				Unit
CPU	23	54840	-	(CCD) Channel Control/DDT
CPU	24	-	-	Open
CPU	25	-	-	Open
CPU	26	-	-	Open
CPU	27	-	-	Open
CPU	28	-	-	Open
CPU		-	-	Open
CPU	30	-	-	Open
CPU	31		-	Open
CPU	32	-	-	Open

FIGURE 24-2. FAA HEADQUARTERS MPS SITE # 24 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	53000	6304	Async Extension Board
I/0		53000	6304	Async Extension Board
I/0		52990	6306	Async Board
I/0	4	52020	3202	Tape Controller
I/ 0	5	55820	3107	Disc Controller SCU I/F
1/0		59980	3107	Disc Controller Channel I/F
1/0		55820	3107	Disc Controller SCU I/F
1/0		59980	3107	Disc Controller Channel I/F
I/ 0	9	59210	6202	Byte Sync Controller
I/0	10	59210	6202	Byte Sync Controller
I/ 0		-	-	Open
I/O	12	-	-	Open
I/O	13	58810	6204	Bit Sync Controller
I/O	14	53000	6304	Async Extension Board
I/0	15	52990	6303	Async Front End Board
I/0	16	51210	3401	UI Controller
I/0	17	55930	3107	Disc Controller SCU I/F
I/0	18	59980	3107	Disc Controller Channel I/F
I/O	19	55930	3107	Disc Controller SCU I/F
I/O	20	59980	3107	Disc Controller Channel I/F
1/0	21	58810	6204	Bit Sync Controller
I/O	22	-	-	Open _
1/0	23	-	4.0	Open
1/0	24	-	-	Open

FIGURE 24-3. FAA HEADQUARTERS MPS SITE # 24 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

						CF	טי	(H	AS	SS	IS												
		5	81 3L	XP MB OT -8	S			\$	81 SL	XP MB OT	S				8 SL	XP ME O1 '-2	S				8 SL	XF ME O 7	3 TS	
DESCRIPTION			8Mb	MC	ع ک	300	ı	'	8Mb	MC	م ک	SO	1	1	- 8Mb	MC	ط ک	SQ	ı		8Mb	MC	⊒ k	SQS
SLOT # CPU -	1	2 3	3 4	5	6 7	7 8	9	10 1	1 12	13	14 1	5 16	17	18 1	9 20	21	222	324	25	26 2	27 28	29	30	3132
I/O CHASSIS																								
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	DISC IVE	DISC CNTL.	OPEN	OPEN	BYTE SYNC	BITSYNC	ASYNC EXT	ASYNC EXT	ASYNC F.E.	ည	TAPE CNTL.	UI. CNTL.
PRODUCT IDENT.	3202 - - 6304 6304 6303							3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	1	ı	6202	6203/4	6304	6304	6303	6105	3208	3401
SLOT # I/O -	1	'							ارما	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		С	PU	PS	·		*	C	* PU	PS	•		*	·	PU	P	S		*		CPL	•	s	

^{*} UPGRADE EQUIPMENT

FIGURE 24-4. FAA HEADQUARTERS MPS SITE # 24 SYSTEM CABINET 2

CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					(CP	U	С	H		SI	S												
		S	NS 6 N 6 L C	AB OT:	S			S	NS 6N 6L 9-	MB OT:	S			S						(OF	ΈI	۷)	
DESCRIPTION	_	- AWP	2Mb	MCB	OS CS		-	AMP	2Mb	MCB	200	-	1	-AMh	2Mb	MCB		3 '						
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 1	1 12	13 1	4 15	16	17	8 19	20	21	222	324	25	262	728	29	303	132
I/O CHASSIS															70									
DESCRIPTION	8	3	8	ASYNC	ASYNC	OPEN	BITSYNC	ASYNC	ASYNC	OPEN	DISC I/F	DISC CNTL	DISCIF	DISC CNTL.	DISC I/F	DISC CNTL.	DISCIF	DISC CNTL.	OPEN	OPEN	BYTE SYNC	OPEN	OPEN	OPEN
PRODUCT IDENT	6105	6105	6105	6106	6106	1	6203/4	6106	6106	1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1		1	6202	-	1	_
SLOT # I/O -	1	2	3	4	5	6	2	8	الصا	<u>[0</u>	1	12	13	14	15 15	16	17	18	19	20	21	22	23	24
	*	c	PU	P:	\$			c	* PU	P:	*	•	*		* CPU	* P	s	*			(OP	EN		

^{*} UPGRADE EQUIPMENT

FIGURE 25-1. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET CPU CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	_	Open
CPU	2	57601	_	0.5 Mb Memory
CPU	3	57602	-	0.5 Mb Memory
CPU	4	57601	_	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	***	(MCB) Memory Control Board (IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	•	-	Open
CPU		57602	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57601		0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57612	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		57601	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
an.				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	_	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU :			-	Open
CPU :	34	-	-	Open

FIGURE 25-2. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET I/O CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O	7	55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
	9	55930	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
I/0		an	-	Open
I/O		_	-	Open
1/0		-	_	Open
1/0		_	•••	Open
I/O				Open
I/O		-	-	Open
I/O		-	_	Open
I/O		-	-	Open
		_	_	Open
I/O	20	53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		59210	6202	Byte Sync Controller
I/O		-	-	Open
I/O		58810	6204	Bit Sync Controller

FIGURE 25-3. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT (DELIVERY 1) - AFTER ENHANCEMENT

					(CP	U	С	H	AS	SI	S												
					S			9	8N 3L	KP MB OT:	S			(51 3L	SII VIB OT -24	S			;	5 S L	SII MB OT	S	
DESCRIPTION			8Mb	MC	<u>-</u> 2	SQ	i	1 1	8Mb	¥C	_ ဗ	SQ	SMb	dMc.	2Mb	MCB	200	-	.5Mb	:5Mb	2Mb	MCB	Od.	-
SLOT # CPU -	1 2	2 3	4	5	6 7	8	9 1	101	1 12	13	4 15	16	17	8 19	20	21	22 2	3 24	25	26 2	728	29	30 3	132
						I/C		CH	-IA	SS	SIS	<u></u>	A					,		<u>.</u>				
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISCIVE	DISC CNTL.	DISCIVE	DISC CNTL.	DISCIVE	DISC CNTL.	DISCIVE	DISC CNTL.	CIU-1P	CIU-1B	201	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202 TA - O - O 6304 AS 6304 AS 6303 AS							3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6101	6101	6101	-	-	_	1	1
SLOT # I/O -	1	2	Լայ	[4]	5	ر م	7	8	الما	ر <u>و</u> ا	11	12	L3]	14	L 15	₁₆	17	18	19	20	التا	[22]	L 23	24
		С	PU	PS	8		•	C	• PU	PS	*	•	*	•	PU	· P	s	*	•	(CPU	J P	s	

^{*} UPGRADE EQUIPMENT

FIGURE 25-4. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT (DELIVERY 1) - AFTER ENHANCEMENT

						CF	U	()H	AS	SI	S												
		((ΟP	ΕN	l)			(OP	ΕN	1)	•		((ΟP	ΕN	1)				(01	PE	N)	
DESCRIPTION																							T	
SLOT # CPU -	1 2	2 3	4	5	6	7 8	9	10 1	112	13	4 15	16	17	18 19	20	21	22 2	3 24	25	26 2	27 28	29	30 3	132
I/O CHASSIS															-									
DESCRIPTION	N N X X X X X X X X X X X X X X X X X X									CIU-IB	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	PRODUCT 2 5 4 4								6101	6101	1	-	1	1	1	1	1	ı					1) -
SLOT # I/O -								8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
UPGRADE EQUIPMENT		1/	0	PS			*	I	/0	*						PS					(01			

UPGRADE EQUIPMENT

FIGURE 25-5. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT (DELIVERY 2) - AFTER ENHANCEMENT

						CF	U	C	H	AS	SI	S					-							
		ļ	81 SL	XP MB OT -8				(81 SL	XP MB OT	S			,	5 SL	SII MB OT	S				5 SL	SI ME 01 5-3	S S	
DESCRIPTION	I	1	- RMb	MC	<u>م</u>	ညတ္တ		1	8Mb	MC	<u>-</u> C	SQ	SMb.	.5Mb	2Mb	MCB	<u> </u>	3	SMb.	.5Mb	2Mb	MCB	PU	
SLOT # CPU -	1	2	3 4	5	6	7 8	9	10 1	1 12	13	4 15	5 16	17	18 1	9 20	21	222	324	25	26 2	27 28	29	30 3	1132
I/O CHASSIS																								
DESCRIPTION	구 구 X X X											DISC CNTL.	DISCIF	DISC CNTL.	CIU-1P	CIU-1B	22	CIU-1P	CIU-1B	ASYNC EXT	ASYNC F.E.	<u> </u>	TAPE CNTL.	UI. CNTL.
PRODUCT IDENT.	00/9	0029	1		1	1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	610 5	6101	6101	6304	6303	6105	┸	3401
SLOT # I/O -	[-]	[2	3	4	5	<u>و</u>	5	8	ړما	10	12	12	لقا	14	157	16	17	18	19	20	21	22	23	24
			CPU	P	s			C	PU	P	S .			(CPL	J P	S				CPI	J F	ès	•

^{*} UPGRADE EQUIPMENT

FIGURE 25-6. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT (DELIVERY 2) - AFTER ENHANCEMENT

						CP	U	С	H	AS	SI	S												
			NS 5 M L C 1-	IB OTS	6				NS 5N LC 9-	IB)TS	8			S	TX 8N LC	IB)T(T) 8N SL(25	TC		
DESCRIPTION	.5Mb	Olwic.	2Mb	MCB		-	SMb.	5Mb	2Mb	MCB	2 6		-	1 1	8Mb	MC	<u>}</u> (:	SO	1	-	8Mb	Q Q	<u>+</u> (:	sa
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 11	12	131	4 15	16	17	8 19	20	21	22 2	324	25	262	728	293	30 3	132
						I/C)	CH	IA:	SS	IS	-										PARTING SEL	*CARLANA	
DESCRIPTION	BYTE SYNC	BIT SYNC	CC	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNTL	CIU - IP	CIU - IB	DISC I/F	DISC CNTL	DISC I/F	DISC CNTL.	DISC I/F	DISC CNTL.	DISC I/F	DISC CNTL	ICC	UI CNTL	100	ASYNC EXT.	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6 30 3	3207	3401	6101	6101	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6105	3401	6105	6304	6304	6303
SLOT # I/O -	[1]	ſ٩	لصا	لوا	L 5	ړه ا	[7]	8	LoJ	10	11	12	13	14	15	16	17	ر ة ا	19	20	[V]	22	L 23	
		С	PU	PS	•			C	PU	PS				(PU	- -	S		*		CPL			

^{*} UPGRADE EQUIPMENT

FIGURE 25-7. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 SYSTEM CABINET 3 CPU AND I/O CHASSIS BOARD LAYOUT (DELIVERY 2) - AFTER ENHANCEMENT

					(CP	U	C	H	AS	SI	<u>s</u>												
		S	8M 8LC	IB OTS	6			(ΟP	ΕN	i)			((ΟP	EN	I)			(OF	E	N)	
DESCRIPTION	1	1 1	8Mb	MC	<u>-</u> C	SQ																		
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 1	1 12	13 1	4 15	16	17	18 19	20	21	22 2	3 24	25	26 2	7 28	29	30 3	1132
						I/C	<u> </u>	CH	AF	SS	SIS	,					k i							
DESCRIPTION	ASYNC	ASYNC	OPEN	OPEN						OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6106	6106		1	ŀ		1	1	1	-	ı	1	1	!	I	1	1	1	1	ı	1		-	1
SLOT # I/O -	11	ړې	الى]	[۴]	L 5	[6]	7.	8	L 0 1	اي	۱ <u>-</u>	ر 1 2	13	14	L 15	16	17	18	19	20	21	22	23	24
	•	c	PU	PS	•	•	*	(OP	EN),					EN)			((OF	,EV	l)	

^{*} UPGRADE EQUIPMENT

FIGURE 26-1. FAA TECHNICAL CENTER (ASM-160) MPS SITE # 26 SYSTEM CABINET CPU CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	57601	-	0.5 Mb Memory
CPU	2	57601	***	0.5 Mb Memory
CPU	3	57602	_	0.5 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	_	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
	_			Unit
CPU	7	57612	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	57603	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		57615	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		57603	-	0.5 Mb Memory
CPU		57602	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57740	_	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor
OD!!				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	- ,	Open
CPU		• -	-	Open
CPU		-	-	Open
CPU	32	-	-	Open

FIGURE 26-2. FAA TECHNICAL CENTER (ASM-160) MPS SITE # 26 SYSTEM CABINET I/O CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	52020	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		55820	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
I/0		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
1/0		53570	6203	Bit Sync Controller
1/0		-	-	Open
I/0		-	_	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		_	-	Open
I/O		55840	6202	Byte Sync Controller
I/O		-	-	Open
I/O		-	-	Open
I/O		-	_	Open
1/0		-	-	Open
1/0		58810	6204	Bit Sync Controller
1/0		-	-	Open
1/0		-	-	Open

FIGURE 26-3. FAA TECHNICAL CENIER (ASM-150) MPS SITE # '6 SYSTEM CALLNET 1 CP. AND 1/0 CHASSIS BOARD LAYOUT AFTER ENHANCLMENT

					(CP.	U	С	14/	15	SI	<u>s</u>												
			TX 8M LC 1-	IB OTS	6			S	T) 8N SLC 9-	IB OTS	8				5N 3L(611 // B OT:				;	51 SL:	SII MB OT -3:	S	
DESCRIPTION			аМ8	Ş Q	<u>မ</u> င	SQ	1	1	8Mb	∑ Ω	ည်	SQ	.5Mb	OMC.	2Mb	MCB	25		SMb.	OMC.	2Mb	MCB	2 5	3 -
SLOT # CPU -	1 3	2 3	4	L	5 7	1	9 1	0 11	12	131	_		171	8 19	20	212	222	324	25 2	262	728	293	303	132
				, .		1/0	-	Cŀ	-AF	SS	SIS							, , , , , , , , , , , , , , , , , , , 				n construction and		
DESCRIPTION	FOX CNTL.	FOX CNTL.	RESV. FOX	RESV. FOX	RESV. FOX	RESV. FOX	DISC IVE	DISC CNTL.	DISC NF	DISC CNTL.	DISC I/F	DISC CNTL.	DISC IF	DISC CNTL.	CIU-1P	CIU-1B	22	CIU-1P	CIU-1B	ASYNC EXT	ASYNC F.E.	SC SS	ASYNC	UI. CNTL.
PRODUCT IDENT.	6700	6700	1	-	1	1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6105	6101	6101	6304	6303	6105	6106	3401
SLOT # I/O -	1	2	3	[4]	5	₆ و	7	8	[ա]	10	12	[²]	13	14	L ₅	16	17	18	19	20	21	22	23	24
	•	c	÷ :PU	P\$	\$	*	•	•	PU	P	\$	•	•	•	* CPU	· I P	s			i	CPI	, J P	s	•

^{*} UPGRADE EQUIPMENT

FIGURE 26-4. FAA TECHNICAL CENTER (ASM-160) MPS SITE # 26 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

					(CP	U	(H	AS	SI	S												
		S			S			S	NS 5M LC 9-	IB OTS	8			((OP	ΕN	I)			((OF	۱ Ξ ۹	N)	
DESCRIPTION	SMb.	SMb SMb	2Mb	MCB	DG C	3 -	.5Mb	SMb	2Mb	MCB	200	-												
SLOT # CPU -	1 2	2 3	4	5	6 7	8	9 1	10 1	1 12	13 1	4 15	16	17	8 19	20	21	222	324	25	26 2	728	29	30 3	3132
						I/C)	CH	AF	SS	is			····										
DESCRIPTION	BYTE SYNC	BITSYNC	8	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	OPEN	OPEN	32	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	DISCIF	DISC CNTL.	OPEN	OPEN	OPEN	ASYNC EXT.	ASYNC EXT.	ASYNC F.E.
PRODUCT IDENT	6202	6203/4	6105	6304	6304	6303	3207	1	1	6105	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	ı	1	1	6304	6304	6303
SLOT # I/O -	1	2	[13]	[4]	L 15	ړه]	لیا	8	ارما	ြင္	1	[12]	[ธีา	14	L 55	16	17	18	19	20	21	22	23	24
		С	PU	PS	}			C	PU	PS	*		*	ŧ.	* ′0	PS	*	•			1/0	PS		

UPGRADE EQUIPMENT

FIGURE 27-1. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940)
MPS SITE # 27 SYSTEM CABINET CPU CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU	2	54740	-	0.5 Mb Memory
CPU	3	54740	_	0.5 Mb Memory
CPU	4	54740	-	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	57612	-	(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	-	-	Öpen
CPU		57602		0.5 Mb Memory
CPU	11	54740	-	0.5 Mb Memory
CPU		57602	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	-	***	Open
CPU		57602		0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		57601	-	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	22	54760	-	(IPU) Instruction Processor Unit
CPU	23	57612	-	(CCD) Channel Control/DDT
CPU	24	-	-	Open
CPU	25	-	-	Open
CPU	26	-	-	Open
CPU	27	-	-	Open
CPU	28	-	-	Open
CPU				Open
CPU	30		•	Open
CPU			400	Open
CPU	32	-	_	Open

FIGURE 27-2. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940)
MPS SITE # 27 SYSTEM CABINET I/O CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
T /O	1	52020	3202	Tape Controller
I/O	1	J2020 _	5202	Open
I/O		- -	2106	Disc Controller SCU I/F
I/O		55820	3106	
I/O		55900	3106	Disc Controller Channel I/F
1/0		-	-	Open
I/ 0		-	-	Open
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
1/0	9	-	-	Open
1/0		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/0		-	-	Open
1/0		51210	3401	UI Controller
1/0		-	-	Open
1/0		•••	-	Open
1/0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		52550	-	Open
		59210	6202	Byte Sync Controller
1/0		59210	0202	
1/0		-	-	Open
1/0		58810	6204	Bit Sync Controller
1/0		-	-	0pen
I/O	24	-	-	Open

FIGURE 27-3. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940) MPS SITE # 27 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

1	8 SL 1	WC WC	3 7 8 8 8	7 8	╁	10 1	8 SL 9 WP	213	S 0 0 0 14 1	5 16	+	18 1	5 SL 17	-2 WCB	S 4	+	QWS:	QWS:	SL 2	MCB 8	rs 2	132
2	+	╀	6	7 8	╁	101	1 12	213	141	5 16		181	9 20		4	+	Н	262	27 28	\sqcup	-	_
2	3 4	5			9	10 1					17	_		21	222	23 24	25			29	30 3	132
	*	•	•	* *	,						- 1	_					<u> </u>			1		
	7	, –	-	1/0	<u> </u>	C	HΑ	S	SIS	<u> </u>				_							***************************************	
_	7	ASYNC EXT	ASYNC EXT	T		Ę		DISC CNTL S		DISC CNTL.	Į.	DISC CNTL.										
OPEN	OPEN	ASY	ASY	ASY	DISC IF	DISC	DISC IF	DISC	DISC NF	DISC	DISC IF	DISC	CIU-1P	CIU-1B	8	CIU-1P	CIU-1B	OPEN	OPEN	OPEN	OPEN	OPEN
-	,	6304	6304	6303	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	3108-1	6101	6101	6105	6101	6101	1	1		1	ı
2	[₁₃]	1	5	6	5	8	Լող	10	11	12	13	14	_		17	_		20	21	22	23	24
С	:PU	P	S			•	PU	*	*	*	*	•	*	*	* S	*	•			*	•	
	- 72	2 3	2 3 4	6304	5 6304 6304 6303	2 3 4 5 6 7 *	6304 6304 6308 1 108-1	2 3 4 5 6 7 8 9 1 108-11	2 3 4 5 6 7 8 9 10 3 108-1 1 3 108-1 2 10 3 108-1 3 10	2 3 4 5 6 7 8 9 10 11 1 3108-1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 3 4 5 6 7 8 9 10 11 12 2 3 4 5 6 7 8 9 10 11 12	2 3 4 5 6 7 8 9 10 11 12 13 10 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1	4 5 6 7 8 9 10 11 12 13 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 3 108-1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	4 5019 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 - 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	+ 1019 + 1019	1 1 <th>2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21</th> <th>2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22</th> <th>2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23</th>	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

UPGRADE EQUIPMENT

FIGURE 27-4. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940) MPS SITE # 27 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

					(CP	U		H			S												
			NS 5 N L C	IB)TS	6				5N 3L(SII AB				(()P	ΕN)			(OF	PEI	4)	
DESCRIPTION	.5Mb	2Mb	2Mb	MCB	200	_	dM2.	SMb	Т	П	200													
SLOT # CPU -	1 2	2 3	4	5	6 7	8	9	101	1 12	13 1	4 15	16	17	8 19	20	21	222	324	25	262	728	29	30 3	132
	NC NC	0		TX.		I/C	Γ.		AA	SS	IS													
DESCRIPTION	BYTE SYNC	BIT SYNC	ASYNC	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	JINO ID	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6202	6203/4	6106	6304	6304	6303	3207	3401	1	,		ı		ı	ŀ	ı	1	1	1	1	i	1	ı	-
SLOT # I/O -	[-]	۲2	[6,1	[۴]	L 5	ړه]	7	8	۱۵۱	10	اتا	12	L 13	14	15 15	_[6]	17	18	19	20	<u>1</u>	22	23	24
		C	PU	PS	•			(OP	EN,)			(OP	EN)			1	(OF	PEN	I)	

^{*} UPGRADE EQUIPMENT

FIGURE 28-1. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 SYSTEM CABINET CPU CHASSIS BOARD LISTING BEFORE ENHANCEMENT

SLOT	ID/‡	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU	2	-	-	Open
CPU	3	-	_	Open
CPU	4	57740	_	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	54840		(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	-	-	Open
CPU	10	-	-	Open
CPU	11	-	_	Open
CPU	12	57740	_	2.0 Mb Memory
CPU	13	54770	_	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	-	-	Open
CPU	18	-	***	Open
CPU	19	-	-	Open
CPU	20	-	-	Open
CPU	21	-	-	Open
CPU		-	-	Open
CPU	23	-	-	Open
CPU		-	-	Open
CPU	25	-	-	Open
CPU		-	-	Open
CPU	27	-	-	Open
CPU			-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU	32	. -	-	Open

FIGURE 28-2. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 SYSTEM CABINET I/O CHASSIS BOARD LISTING BEFORE ENHANCEMENT

CTOM TO /	PART	PRODUCT	
SLOT ID/#	NUMBER	IDENT	PRODUCT DESCRIPTION
I/O 1	-	-	Open
I/O 2	51210	3401	UI Controller
I/O 3	58810	6204	Bit Sync Controller
I/O 4	-	-	Open
I/O 5	53000	6304	Async Extension Board
I/O 6	52990	6303	Async Front End Board
I/O 7	58810	6204	Bit Sync Controller
I/O 8	-	-	Open
I/O 9	55820	3106	Disc Controller SCU I/F
I/O 10	55900	3106	Disc Controller Channel I/F
I/O 11	55820	3106	Disc Controller SCU I/F
I/O 12	55900	3106	Disc Controller Channel I/F
I/O 13	-	-	Open
I/O 14	••	-	Open
I/O 15	49040	3202	Tape Controller
I/O 16	-	-	Open
I/O 17	-	-	Open
I/O 18	•••	-	Open
I/O 19	•	-	Open
I/O 20	53000	6304	Async Extension Board
I/O 21	52990	6303	Async Front End Board
I/O 22	-	-	Open
I/O 23	-	-	Open
I/O 24	-	-	Open

FIGURE 28-3. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 SYSTEM CABINET 1 CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

					(CP	U	C	H/	15	SI	S												
		5	T) 8N SL(ΛB	S			S	TX 8M SLC 9-	AB) T (5				51 31	SII MB OT -24				,	51 SL	SII MB OT -3	S	
DESCRIPTION	1	1	8Mb	MC	≟ ဗ	SQ	l	1 1	8Mb	Ş Ş	ည်	SQ	GMS.	OMC.	2Mb	MCB	D CO		SMb.	SMb AMS	2Mb	MCB	200	
SLOT # CPU -	1	2	3 4	5	6 7	8	9 1	0 11	12		4 15		171	8 19	20	212	222	3 24	25	262	728	293	30 3	132
	I/O CHASSIS																							
DESCRIPTION	TAPE CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	DISC NF	DISC CNTL.	DISC NF	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	lcc	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT.	3202			6304	6304	6303	3108-1	3108-1	3108-1	3108-1	-	1	1	-	١	-	6105	1	1	L	ı	1	-	-
SLOT # I/O -	1	T 2	3	4	5	[6]	Ź	8	[- Թ]	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		CPU PS				*	·	• PU	* ! P:	S				CPU	J P	S				CPI	J F	PS		

^{*} UPGRADE EQUIPMENT .

FIGURE 28-4. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 SYSTEM CABINET 2 CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

						CP	U	С	H	AS	SI	S							_	_				
		(0	ЭP	EN	l)			(OP	ΕN	I)			((ЭP	EN	l)			(OF	ÈΙ	۷)	
DESCRIPTION																								
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 1	1 12	13	4 15	16	171	8 19	20	21	222	324	25	262	728	29	30 3	132
	I/O CHASSIS																							
DESCRIPTION	BITSYNC	BITSYNC	20	ASYNC EXT	ASYNC EXT	ASYNC F.E.	TAPE CNTL	UICNTL	ASYNC	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PRODUCT IDENT	6203/4	6203/4	6105	6304	6304	6303	3207	3401	6106	l	1		1	1	1	ı	1	1		ı	ı		-	1
SLOT # I/O -	[-]	2	13	4	5	6	7	8	۱۵٦	10	11	12	13	14	15 15	16	17	18	19	20	2 ₁	22	23	24
		I/O PS				•	V	0	PS				l	/O	PS				((OF	EN	!)		

^{*} UPGRADE EQUIPMENT

FIGURE 29-1. DALLAS/FT. WORTH MPS SITE # 29 SYSTEM CABINET
CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU	2	-	_	Open
CPU	3	-	-	Open
CPU	4	57740		2.0 Mb Memory
CPU	5	54770	_	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	54840	_	(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	_		Open
CPU	10	-	_	Open
CPU		-	-	Open
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
	31			Open
CPU	32	-	-	Open

FIGURE 29-2. DALLAS/FT. WORTH MPS SITE # 29 SYSTEM CABINET

1/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/ 0	1	58000	3202	Tape Controller
I/O		51210	3401	UI Controller
I/O		58810	6204	Bit Sync Controller
I/O		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		_	_	Open
I/O		-	_	Open
I/O	9	55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O		_	-	Open
I/O		-	-	Open
I/O		_	-	Open
I/O		-	-	Open
I/O		59210	6202	Byte Sync Controller
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		_	-	Open
I/O		_	-	Open
I/O		_	-	Open

FIGURE 29-3. DALLAS/FT. WORTH MPS SITE # 29 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

	*******	an and an	COMMONWAY	THE CONTRACTOR	(CP	U	C	H	AS	SI	S												
		S			S			8	5N 3L(SII MB OT 16	S			Ş	51 3L	SII MB OT				1	5 SL	SI ME OT	S	
DESCRIPTION	5Mb	2Mb	2Mb	MCB	F0		SMb	awc.	2Mb	MCB	000		5Mb	SMb	2Mb	MCB	000	3	.5Mb	5Mb	2Mb	MCB	DGI	3
SLOT # CPU -	1	2 3	4	5	ε 7	8	91	0 1	12	13 1	4 15	16	171	8 19	20	212	222	324	1 1		+-	1		132
MBOOT IN CARPORATION OF THE PROPERTY.	ŧ	1					Ĭ	ì					1	•	1	l	1 1				!	*		
	T .	T	 T	T	,	I/C)	Cł	ΔŁ	SS	SIS						**************************************		***************************************				to a service of the s	
DESCRIPTION	TAPE CNTL.	CN O	CPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	BIT SYNC	OPEN	DISC IF	DISC CNTL.	DISCIVE	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	OPEN
PRODUCE IDENT.	3202	3401		6304	6304	6303	5203/4		3108-2	3108-2	3108-2	3108-2		ATTEN	ļ	į	8202	Į.	6304	6304	6303	ı	-	-
SLOT # 1/0 -	1	2	3	4	5	ϵ	7	8	[O]	10	11	12	13	14	15	ίô	17	18	19	20	21	22	23	24
UPGRADE EQUIPMENT	THE RESERVE OF THE PARTY OF THE	С	PU	PS	ŝ			c	PU	P:	5	*		C	:PU	jo:	5			the second	OP!)	\$	

UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 30-1. MEMPHIS MPS SITE # 30 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/‡	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1		•	Open
CPU		_	-	Open
CPU	3	-	-	Open
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	_	Open
CPU	9	-	-	Open
CPU	10	-	_	Open
CPU	11	-		Open
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	••	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU			-	Open
CPU				Open
CPU			-	Open
CPU			-	Open
CPU		-	-	Open
CPU	32	-	-	Open

FIGURE 30-2. MEMPHIS MPS SITE # 30 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	49040	3202	Tape Controller
I/0	2	51210	3401	UI Controller
1/0	3		-	Open
1/0		53000	6304	Async Extension Board
I/ 0		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
I/ 0		58810	6204	Bit Sync Controller
I/ 0		59210	6202	Byte Sync Controller
1/0	9	55820	3106	Disc Controller SCU I/F
1/0	10	55900	3106	Disc Controller Channel I/F
I/0	11	55820	3106	Disc Controller SCU I/F
I/O	12	55900	3106	Disc Controller Channel I/F
I/O	13	-	-	Open
I/O	14	59210	6202	Byte Sync Controller
I/O	15	-	-	Open
I/0	16	-	-	Open
1/0	17	-	-	Open
I/O	18	-	-	Open
1/0	19	-	-	Open
I/O	20	53000	6304	Async Extension Board
1/0	21	52990	6303	Async Front End Board
I/O	22	-	-	Open
I/0		-	-	Open
1/0	24	-	-	Open

FIGURE 30-3. MEMPHIS MPS SITE # 30 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

						CP	U	С	H	AS	SI	S												
		S	NS 5N 5LC	MB OTS	S			S	NS 5N SL(TC	S							-			5 SL	SII ME OT	S	
DESCRIPTION	.5Mb	SMb	2Mb	MCB	CCD		SMb.	SMb	2Mb	MCB	033	ļ	GMS.	OMC.	2Mb	MCB	02	1	.5Mb	.5Mb	2Mb	MCB	Da COO	1
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 11	12	13 1	4 15	16	17 1	8 19	20	212	22 2:	3 24	25	262	728	29	30 3	1 32
	I/O CHASSIS																							
DESCRIPTION	TAPE CNTL.	UI CNTL.	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	BIT SYNC	OPEN	DISC VF	DISC CNTL.	DISC NF	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	BYTE SYNC	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	OPEN
PRODUCE IDENT.	3202	3401	ı	6304	6304	6303	6203/4	ı	3108-2	3108-2	3108-2	3108-2	_	_	_	_	6202	6202	1	6304	6303		ı	_
SLOT # I/O -	1	2	3	4.	5	6	7	8	الصا	<u>1</u> 2	11	12	13	14	15	[6]	17	18	19	20	21	22	23	24
,		CPU PS					C	PU	PS	*	*		C	PU	P	S				CPI	J P	'S		

^{*} UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 31-1. NORFOLK MPS SITE # 31 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	_	_	Open
CPU	2	57740	_	2.0 Mb Memory
CPU	3	57740	-	2.0 Mb Memory
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	-	-	Open
CPU		57740	-	2.0 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor Unit
CPU	15	54840	_	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU	17	-	-	Open
CPU	18	-	-	Open
CPU	19	_	-	Open
CPU	20	-	-	Open
CPU	21	-	-	Open
CPU	22	-	-	Open
CPU	23	-	-	Open
CPU	24	•	-	Open
CPU		-	_	Open
CPU		-	-	Open
CPU	27	-	-	Open
CPU		-	-	Open
CPU				Open
CPU		-	-	Open
CPU		-	-	Open
CPU	32	-	-	Open

FIGURE 31-2. NORFOLK MPS SITE # 31 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	49040	3202	Tape Controller
1/0	2	51210	3401	UI Controller
1/0	3	-	-	Open
1/0	4	53000	6304	Async Extension Board
I/ 0	5	53000	6304	Async Extension Board
I/O	6	52990	6303	Async Front End Board
I/O	7	55820	3106	Disc Controller SCU I/F
I/O		55900	³ 106	Disc Controller Channel I/F
I/O	9	55820	3106	Disc Controller SCU I/F
I/ 0	10	55900	3106	Disc Controller Channel I/F
I/O	11	-	-	0pen
I/O	12	-	-	0pen
I/O	13	-	-	Open
I/O	14	53000	6304	Async Extension Board
I/O	15	52990	6303	Async Front End Board
I/O	16	-	-	Open
I/O	17	55840	6202	Byte Sync Controller
I/O	18	-	-	Open
I/O		-	-	Open
I/O	20	-	-	Open
1/0	21	_		Open
I/O		58810	6204	Bit Sync Controller
I/O		-	-	Open
I/O	24	-	-	Open

FIGURE 31-3. NORFOLK MPS SITE # 31 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

					(CP	U	-)H	AS	SI	S											****	
		\$	5N SL(SII MB OT:	S				N: 5M SL(SII VB	s				51 3L	SII MB OT					5 SL	SI ME OT	S	
DESCRIPTION	SMb.	5Mb	2Mb	MCB	⊋ (C		.5Mb	SMb	2Mb	MCB		_	.5Mb	5Mb	2Mb	MCB	2 5	31	.5Mb	.5Mb	2Mb	MCB	PI CO	3 1
SLOT # CPU -	1	2 3 4 5 6 7 8						0 1	1 12	131	4 15	16	171	8 19	20	212	22	3 24	25	262	728	29	30 3	1 32
																			******				-	
	Τ.	Т	Т	Τ.	Γ.	I/C	<u> </u>	CI	AH	SS	SIS	· -					 ,		г			_	_	
DESCRIPTION	TAPE CNTL	UI CNTL.	OPEN	ASYNC EXT	ASYNC EXT	ASYNC F.E.	BIT SYNC	OPEN	DISCIF	DISC CNTL.	DISCIF	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	OPEN
PRODUCE IDENT.	3202	3401		6304	6304	6303	6203/4		3108-2	3108-2	3108-2	3108-2	-		-	1	6202	ı	1	6304	6303	-	1	ı
SLOT # I/O -	۲٦	2	3	4	5	6	5	8	9	10	11	ر <u>ت</u> ا	13	14	15	16	17	18	19	20	21	22	23	24
		CPU PS						C	PU	P	S	*		C		P	3				CPL		S	

UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 32-1. WINDSOR LOCKS MPS SITE # 32 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU	2	-	-	Open
CPU	3	-	-	Open
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		57740	•	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	_	Open
CPU		-	-	Open
CPU		-	_	Open
CPU		-	_	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU			-	Open
CPU		-	_	Open
CPU		-	-	Open
CPU CPU		_	-	Open
	. —	••	-	Open
CPU	32	-	-	Open

FIGURE 32-2. WINDSOR LOCKS MPS SITE # 32 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	49040	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O		-	_	Open
1/0		-	-	Open
1/0		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
1/0		58810	6204	Bit Sync Controller
I/O		58810	6204	Bit Sync Controller
	9	55820	3106	Disc Controller SCU I/F
1/0	10	55900	3106	Disc Controller Channel I/F
I/0		55820	3106	Disc Controller SCU I/F
1/0	12	55900	3106	Disc Controller Channel I/F
1/0		-	_	Open
1/0	14	-	-	Open
1/0	15	-	-	Open
1/0	16	59210	6202	Byte Sync Controller
1/0	17	-	-	0pen -
I/O	18	-	-	Open
I/O	19	-	_	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/0		•••	-	Open
I/O		_	-	Open
I/0			-	Open

FIGURE 32-3. WINDSOR LOCKS MPS SITE # 32 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT - AFTER ENHANCEMENT

					(CP	U	C	H	AS	SI	S												
		S	5M 5L 1-	MB OTS	S			\$	5N SL(SII MB DT: 16	S			\$	51 SL(SII MB OT -24					5 SL	S1 ME O1 5-3	S	
DESCRIPTION	dM3.	.5Mb	2Mb	MCB	000 000	1	SMb	ome.	2Mb	MCB	SCD CCD	-	.5Mb	SMb	2Mb	MCB	DA UJJ	3 1	.5Mb	.5Mb	2Mb	MCB	Dd.	
SLOT # CPU -	1	2 3	4	5	6 7	8	9 1	0 1	1 12	131	4 15	16	17 1	8 19	20	212	222	324	25	262	728	29	30 3	1 32
•											•	•	,			•	•		1	1				
DESCRIPTION	TAPE CNTL.	UI CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	T	OPEN	DISC I/F	DISC CNTL.	DISCIF	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	BIT SYNC
PRODUCE IDENT.	3202	3401	ł	-	6304	6303	6203/4	-	3108-2	3108-2	3108-2	3108-2	1	1	1	ı	6202	1	-	6304	6303	1	i	6203/4
SLOT # I/O -	SLOT # I/O - 1 2 3 4 5 6							8	الصا	رو]	11	ر 1 2	13	14	15	16	L 17	18	19	20	L 21	22	23	24
	CPU PS							CPU PS						CPU PS						CPU PS				

UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 33-1. DETROIT MPS SITE # 33 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	Product Ident	PRODUCT DESCRIPTION
CPU	1	-	Q229	Open
CPU	2	#GD	es	Open
CPU	3	-	•	Open
CPU	4	57740		2.0 Mb Memory
CPU	5	54770	400	(MCB) Memory Control Board
CPU	6	54760	€m	(IPU) Instruction Processor
				Unit
CPU	7	54840	~	(CCD) Channel Control/DDT
CPU	8	-	(Cales	Open
CPU	9	-		Open
CPU		-	•	Open
CPU		-	€ 132b	Open
CPU		57740	CE 2004	2.0 Mb Memory
CPU		54770		(MCB) Memory Control Board
CPU	14	54760	8	(IPU) Instruction Processor
				Unit
CPU		54840	e tto	(CCD) Channel Control/DDT
CPU		•	eza.	Open
CPU		•	@50	Open
CPU		Acro	ears.	Open
CPU		-	600	Open
CPU		-	<u> </u>	Open
CPU		-		Open
CPU		-	40 20	Open
CPU		-		Open
CPU		410	eun	Open
CPU		-		Open
CPU		-		Open
CPU		•		open
CPU		-	₩	o pen
CPU			ato.	open
CPU		***	e	open
CPU		-		o pen
CPU	32		₩	Open

FIGURE 33-2. DETROIT MPS SITE # 33 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/0	1	49040	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O		-	-	Open
I/O	4		-	Open
I/0	5	53000	6304	Async Extension Board
I/0	6	52990	6303	Async Front End Board
I/O	7	58810	6204	Bit Sync Controller
1/0		58810	6204	Bit Sync Controller
1/0	9	55930	3106	Disc Controller SCU I/F
1/0	10	55900	3106	Disc Controller Channel I/F
1/0	11	55820	3106	Disc Controller SCU I/F
1/0	12	55900	3106	Disc Controller Channel I/F
1/0	13	-	-	Open
1/0	14	· ·	-	Open
1/0	15	-	-	Open
1/0	16	_	-	Open
I/0	17	59210	6202	Byte Sync Controller
1/0	18	-	-	Open
I/0	19	-	-	Open
1/0	20	53000	6304	Async Extension Board
1/0	21	52990	6303	Async Front End Board
I/0	22	-	-	Open
I/0	23	-	-	Open
I/O	24	-	-	Open

FIGURE 33-3. DETROIT MPS SITE # 33 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

	CPU CHASSIS																							
		S	5N		ST. 1809				NS 5M	SII VB				(51 3L	SII MB OT	S	***************************************		end the offi	5 SL	ISI ME OT	B TS	
DESCRIPTION	SMb.	owe.	2Mb	MCB	<u> </u>	3	.5Mb	5Mb	2Mb	MCB	2 G	}	SMb.	SMb SMS	2Mb	MCB	200	3	.5Nb	5M5	2Mb	MCB	<u> </u>	3 1
SLOT # CPU -	1	2 3	4	5	6 7	8	9 10 11 12 13 14 15 16						17 1	8 19	20	21	22/2	324	25		_			-
	I/O CHASSIS																							
DESCRIPTION	TAPE CNTL.	UI CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	No.		DISC NF	DISC CNTL.	DISC VF	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	BITSYNC
PRODUCE IDENT.	3202	3401	ł	J	6304	6303	6203/4		3108-2	3108-2	3108-2	3108-2	1	1	l	ı	6202	-	_	6304	6303	1	1	6203/4
SLOT # I/O -	1	2	$\lceil \omega_1 \rceil$	[۴]	5	6-	ا ۱	8	10,	<u>, 2</u>]	11	12	13	14	15	16	17	18	Lڥا	20	[2]	22	23	
	CPU PS CPU PS CPU PS UPGRADE FOLIPMENT																							

UPGRADE EQUIPMENT

[|] RELOCATED EQUIPMENT

FIGURE 34-1. ST. LOUIS MPS SITE # 34 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	54740	-	0.5 Mb Memory
CPU	2	54740	_	0.5 Mb Memory
CPU	3	57603	_	0.5 Mb Memory
CPU	4	57603	-	0.5 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor Unit
CPU	7	54840	_	(CCD) Channel Control/DDT
CPU	8	- .	_	Open
CPU	9	54740	_	0.5 Mb Memory
CPU	10	54740	_	0.5 Mb Memory
CPU	11	57601	-	0.5 Mb Memory
CPU		57601	•••	0.5 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		59690	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		- .		Open
CPU	32	-	_	Open

FIGURE 34-2. ST. LOUIS MPS SITE # 34 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	Product Ident	PRODUCT DESCRIPTION
I/ 0	1	52020	3202	Tape Controller
I/O	2	51210	3401	UI Controller
1/0		-	C 235	Open
1/0	4	•	6 235	Open
I/O	5	53000	6304	Async Extension Board
I/O	6	52990	6303	Async Front End Board
I/ 0	7	55820	3601a	Disc Controller SCU I/F
I/O		55900	3601a	Disc Controller Channel I/F
I/O	9	55930	3106	Disc Controller SCU I/F
I/ 0		55900	3106	Disc Controller Channel I/F
1/0		55930	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/ 0		•	€ 220	Open
I/ 0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		***	·	Open
I/O		53570	6203	Bit Sync Controller
I/O		62	4529	Open
I/O		55840	6202	Byte Sync Controller
I/O		59210	6202	Byte Sync Controller
I/O		59210	6202	Byte Sync Controller
1/0		58810	6204	Bit Sync Controller
I/O		•	627	Open
1/0	24	•	•	Open

FIGURE 34-3. ST. LOUIS MPS SITE # 34 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

	CPU CHASSIS NSII NSII NSII NEII																							
		S	5N	SII MB OT:	S			\$	5N SL(SII MB OT 16	S			(51 SL	SII MB OT	S				5 SL	SI ME OT S-3	3 (S	
DESCRIPTION	.5Mb	SMb	2Mb	MCB	Od C	1	.5Mb	SMb	2Mb	MCB	<u> </u>	-	.5Mb	-5Mb	2Mb	MCB	<u>B</u>	3 1	.5Mb	.5Mb	2Mb	MCB	PU	- -
SLOT # CPU -	1	2 3	4	5	6 7	, 8	9	0 1	1 12	13	4 15	16	17	18 19 20 21 22 23 24						262	728	29	30 3	1 32
I/O CHASSIS																								
DESCRIPTION	TAPE CNTL	UI CNTIL	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	BIT SYNC OPEN DISC I/F DISC CNTL DISC CNTL				OPEN OPEN OPEN OPEN BYTE SYNC					BYTE SYNC	OPEN	ASYNC EXT	ASYNC F.E.	BYTE SYNC	OPEN	BIT SYNC		
PRODUCE IDENT.									3108-2	3108-2	3108-2	3108-2	-	_	1	-	6202	6202	_	6304	6303	6202	1	6203/4
SLOT # I/O -	SLOT # I/O - 1 2 3 4 5								Լայ	[0]	1	12	13	14	15	16	17	18	19 20 21 22 23 24					
	CPU PS							CPU PS					CPU PS						CPU PS					

UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 35-1. WICHITA MPS SITE # 35 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	Product Ident	PRODUCT DESCRIPTION
CPU	1		450	Open
CPU	2	-	-	Open
CPU	3	-	-	Open
CPU	4	57740	~~	2.0 Mb Memory
CPU	5	54770	COS O	(MCB) Memory Control Board
CPU	6	54760	400	(IPU) Instruction Processor
CPU	7	54040		Unit
CPU	7 8	54840	8 00	(CCD) Channel Control/DDT
CPU	9	-	6	Open
CPU	_	-	-	Open
CPU		-		Open
CPU		- -	-	Open
CPU		57740 54770	422	2.0 Mb Memory
CPU		54770 54760	was:	(MCB) Memory Control Board
CPU	14	54/60	em	(IPU) Instruction Processor Unit
CPU	15	54840	•	(CCD) Channel Control/DDT
CPU	16	_	-	Open
CPU	17	-	5 3	Open
CPU	18	-	-	Open
CPU	19	Can Can	-	Open
CPU		-	•••	Open
CPU		•	-	open .
CPU		410	000	Open
CPU		-	-	Open
CPU			-	Open
CPU		-	Man .	Open
CPU		-	4 12	Open
CPU		-	en	Open
CPU		-	660	Open
CPU		-	625	Open
CPU		-	er:	Open
CPU		-		Open
CPU	32	. -	65	Open

FIGURE 35-2. WICHITA MPS SITE # 35 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
1/0	1	49040	3202	Tape Controller
1/0		51210	3401	UI Controller
1/0		-	-	Open
I/0		-	-	Open
1/0		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
1/0		58810	6204	Bit Sync Controller
1/0		58810	6204	Bit Sync Controller
1/0		55820	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
1/0		55820	3106	Disc Controller SCU I/F
1/0		55900	3106	Disc Controller Channel I/F
1/0		-	-	Open
I/O		59210	6202	Byte Sync Controller
I/O		59210	6202	Byte Sync Controller
I/O		-	-	Open
I/O		-	-	Open
I/O		-	-	Open
I/O		-	-	Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		-	-	Open
I/O		_	-	Open
I/O		-	-	Open

FIGURE 35-3. WICHITA MPS SITE # 35 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

	<u> </u>	or more equipe		- Filoso)P	U	C	HA	15	SI:	5	IYUNDAD.							TE SOUT.	LETEL PER		17,241. 0		
			NS 5N LC	IB)T\$	3		i ini Asa	S	N S 5 N L C 9 -	IB)TS	3				NS 5N 6L (an TC		mankel 1.5 G			51 31.	SII WB OT	S		
DESCRIPTION	.5Mb							2Mb	2Mb	2 2 2 2 2	0 0 0 0 0) -	SMb.	2Mb	2Mb	MCB	255		SWb.	2865	2Mb	808	5 6		
SLOT # CPU -	1	2 3	4	5 (3 7	8	9 1	0 11	12	13 1	4 15	16	171	8 19	20	212	223	3 24	25/2	25 26 27 28 29 30 31 3					
DESCRIPTION	TAPE CNTL. UI CNTL. OPEN OPEN ASYNC EXT ASYNC F.E.								DISC W	DISC CNTL.	DISCUE	DISC CNTL.	OPEN	NEGO	N H O	OPEN	BYTESYNC	BYTE SYNC	OPEN	ASYNC EXT	ASYNO F.E.	E E E	NEGO	BIT SYNC	
	毕	5	0	Ō	¥	Ä	BIT SYNC	OPEN	۵	۵	۵	ā	O	O	0	O	60	6	Ō	Ą	×	Ō	Ō	Ö	
PRODUCE IDENT.	3202	3401	1		6304	6303	6203/4	ı	3108-2	3108-2	3108-2	3108-2	1	1	1	1	6202	6202		6304	6303	ı	1	6203/4	
SLOT # I/O -	SLOT # I/O - 1 2 3 4 5								-e 1	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	CPU PS							C	;pu	P		***************************************			;PU	P			aundin sti	and the state of t	CP		A STATE OF THE STA		

UPGRADE EQUIPMENT

[|] RELOCATED EQUIPMENT

FIGURE 36-1. DENVER MPS SITE # 36 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU	2	-	-	Open
CPU	3	-	-	Open
CPU	4	57740	-	2.0 Mb Memory
CPU	5	54770	-	(MCB) Memory Control Board
CPU	6	54760	•	(IPU) Instruction Processor
				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU	8	-	-	Open
CPU	9	_	-	Open
CPU	10	-	-	Open
CPU	11	-	-	Open
CPU	12	57740	-	2.0 Mb Memory
CPU	13	54770	-	(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU	17	-	•	Open
CPU	18	-	-	Open
CPU	19	-	-	Open
CPU	20	-	-	Open
CPU	21	-	-	Open
CPU	22	-	-	Open
CPU	23	-	-	Open
CPU	24	-		Open
CPU	25	-	-	Open
CPU		-	-	Open
CPU	27	-	-	Open
CPU	28	-	-	Open
CPU	29	-	-	Open
CPU	30	-	-	Open
CPU	31	-	•	Open
CPU	32	•	-	Open

FIGURE 36-2. DENVER MPS SITE # 36 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/ 0	1	49040	3202	Tape Controller
I/O		51210	3401	UI Controller
I/O	3	-	Citie	Open
I/ 0	4	-		Open
I/O		53000	6304	Async Extension Board
I/O		52990	6303	Async Front End Board
I/O		58810	6204	Bit Sync Controller
I/O		58810	6204	Bit Sync Controller
I/O	9	55820	3106	Disc Controller SCU I/F
I/O		55900	3106	Disc Controller Channel I/F
I/O	11	55820	3106	Disc Controller SCU I/F
I/ 0		55900	3106	Disc Controller Channel I/F
I/ 0		-	6	Open
I/O		59210	6202	Byte Sync Controller
I/ 0		59210	6202	Byte Sync Controller
I/O		*	a 23	Open
1/0		53000	6304	Async Extension Board
I/ 0		52990	6303	Async Front End Board
I/ 0		420	@ D	Open
I/O		53000	6304	Async Extension Board
1/0		52990	6303	Async Front End Board
I/O		4	€0	Open
1/0		-	65	Open
I/O	24	-	⇔	Open

FIGURE 36-3. DENVER MPS SITE # 36 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

CPU CHASSIS																								
	NSII 5MB SLOTS 1-8							NS 5M 5LC 9-	SII MB OT:				9			S		NSII 5MB SLOTS 25-32						
DESCRIPTION	.5Mb	SMB SMB SMB MCB MCB IPU CCD -				.5Mb	2Mb	2Mb	MCB	000		.5Mb	OMC.	2Mb	MCB	PO	3 1	.5Mb	:5Mb	2Mb	MCB			
SLOT # CPU -	1	2 3	4	5 6	5 7	8	9 1	0 11	12	13 1	4 15	16	17 1	8 19	20	21/2	22 23	324	25	262	728	29	30 3	1 32
I/O CHASSIS												·												
DESCRIPTION	TAPE CNTL.	UI CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	BIT SYNC	OPEN	DISCIVE	DISC CNTL.	DISC I/F	DISC CNTL.	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	BYTE SYNC	BYTE SYNC	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	BIT SYNC
PRODUCE IDENT.	3202	3401	1	1	6304	6303	6203/4	-	3108-2	3108-2	3108-2	3108-2	_	6304	6303	l	6202	6202	1	6304	6303	1	1	6203/4
SLOT # 1/O -	SLOT # I/O - 12 3 4 5 6								رما	10	۱Ξ	[2]	L 13	14	157	_{[6}	17	18	19	20	21	22	23	24
	CPU PS							C	PU	P:	*	•			PU	P	s				CPI	JF	PS	

^{*} UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 37-1. EDWARDS AFB MPS SITE # 37 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	•	•	Open
CPU	2	-	60 00	Open
CPU	3	-	•	Open
CPU	4	57740	€2>	2.0 Mb Memory
CPU	5	54770	400	(MCB) Memory Control Board
CPU	6	54760	enc.	(IPU) Instruction Processor
				Unit
CPU	7	54840	*-	(CCD) Channel Control/DDT
CPU	8	_	-	Open
CPU	9	-	623	Open
CPU		-	•	Open
	11	-	-	Open
CPU		57740	_	2.0 Mb Memory
CPU		54770		(MCB) Memory Control Board
CPU	14	54760	-	(IPU) Instruction Processor
				Unit
CPU		54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU		-	-	Open
CPU		-	•	Open .
CPU		-	-	Open
CPU		•	•	Open
CPU		-	•	Open
CPU		-	_	Open
CPU		-	-	Open
CPU				Open
CPU		-	-	Open
CPU		-	-	Open .
CPU		-	-	Open
CPU		-	•	Open
CPU		-	etias	Open
CPU				Open
CPU		•	•••	Open
CPU :	32	-	415	Open

FIGURE 37-2. EDWARDS AFB MPS SITE # 37 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/ 0	1	49040	3202	Tape Controller
I/O	2	51210	3401	UI Controller
I/O	3	-	_	Open
I/O	4	-	-	Open
I/0	5	53000	6304	Async Extension Board
I/O	6	52990	6303	Async Front End Board
I/O	7	58810	6204	Bit Sync Controller
I/O	8	-	-	Open
I/O	9	55820	3106	Disc Controller SCU I/F
I/O	10	55900	3106	Disc Controller Channel I/F
I/ 0	11	55820	3106	Disc Controller SCU I/F
I/ 0	12	55900	3106	Disc Controller Channel I/F
I/0	13	-		Open
I/O	14	-	-	Open
I/O	15		-	Open
I/O	16	-	-	Open
I/O		-	-	Open
I/O	18	-	-	Open
I/O	19	-	-	Open
I/O		53000	6304	Async Extension Board
I/ 0	21	52990	6303	Async Front End Board
I/O		-	-	Open
I/O	23	-	-	Open
1/0	24	-	-	0pen

FIGURE 37-3. EDWARDS AFB MPS SITE # 37 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

CPU CHASSIS																								
	NSII 5MB SLOTS 1-8						NSII 5MB 5LOTS 9-16				NSII 5MB SLOTS 17-24						NSII 5MB SLOTS 25-32							
DESCRIPTION	.5Mb	SMB SMB SMB SMB MCB IPU CCD				.5Mb	-5Mb	2Mb	MGB B			.5Mb	.5Mb	2Mb	MCB	2	31	SMb	5 Mb		WCB		3 1	
SLOT # CPU -	1					9	101	1 12	13	4 1 !	5 16	17	18 19	20	21	22 2	3 24	25	26/2	e se passer	O DESCRIPTION OF		31 32	
1/0								Cl	1A	SS	315	anno de montre a	escino dano r	and relative	T IN SUCKE WAY	TROUGH SECTION	MOLATECT	······································	en e	N. Notice of a	The second second		2007 (Source Co.)	r CT SIGN LINANSES
DESCRIPTION	TAPE CNTL.	UI CNTL	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	BIT SYNC	OPEN	DISC WF	DISC CMT.	DISC W	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	ASYNCEXT	ASYNC F.E.	OPEN SIN	OPEN	OPEN
PRODUCE IDENT.	3202	3401	1	-	6304	6303	6203/4	-	3108-2	3108-2	3108-2	3108-2	1	l			ı	, camerican		6304	6303	1	ļ	-
SLOT # I/O -	1	2	<u></u> -ω-	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		21	2 2	23	24
CPU PS								C	PU	₩	ŧ.	te teamin'									SPU			rand

UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

FIGURE 38-1. FAIRBANKS MPS SITE # 38 SYSTEM CABINET CPU CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
CPU	1	-	-	Open
CPU			-	Open
CPU		-	-	Open
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU	6	54760	-	(IPU) Instruction Processor
•••				Unit
CPU	7	54840	-	(CCD) Channel Control/DDT
CPU		-	-	Open
CPU	9	-	-	Open
CPU	10	_	-	Open
CPU		-	-	Open
CPU		57740	-	2.0 Mb Memory
CPU		54770	-	(MCB) Memory Control Board
CPU		54760	-	(IPU) Instruction Processor
				Unit
CPU	15	54840	-	(CCD) Channel Control/DDT
CPU	16	-	-	Open
CPU		-	-	Open
CPU	18	-	-	Open
CPU	19	-	-	Open
CPU	20	-	440	Open
CPU	21	-	-	Open
CPU	22	-	-	Open
CPU	23	-	-	Open
CPU	24	-	-	Open
CPU	25	-	-	Open
CPU	26	-	_	Open
CPU	27	-	-	Open
CPU		_	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU		-	-	Open
CPU	32	-	· -	Open

FIGURE 38-2. FAIRBANKS MPS SITE # 38 SYSTEM CABINET I/O CHASSIS BOARD LISTING - BEFORE ENHANCEMENT

SLOT	ID/#	PART NUMBER	PRODUCT IDENT	PRODUCT DESCRIPTION
I/O	1	49040	3202	Tape Controller
I/ 0		51210	3401	UI Controller
I/O		-	-	Open
I/O	4	-	_	Open
I/O		53000	6304	Async Extension Board
I/0		52990	6303	Async Front End Board
I/O	7	58810	6204	Bit Sync Controller
I/0	8	53570	6203	Bit Sync Controller
I/0	9	55820	3106	Disc Controller SCU I/F
I/0	10	55900	3106	Disc Controller Channel I/F
I/0	11	55820	3106	Disc Controller SCU I/F
I/O	12	55900	3106	Disc Controller Channel I/F
I/O	13	-	_	Open
I/O	14	-	-	Open
I/O	15	-	_	Open
I/O	16	-	-	Open
I/O		59210	6202	Byte Sync Controller
I/O	18	-	-	Open
I/O	19	-	-	Open
I/O	20	53000	6304	Async Extension Board
I/O	21	52990	6303	Async Front End Board
I/O	22	-	-	Open
1/0	23	-	-	Open
I/O	24	-	_	Open

FIGURE 38-3. FAIRBANKS MPS SITE # 38 SYSTEM CABINET CPU AND I/O CHASSIS BOARD LAYOUT AFTER ENHANCEMENT

CPU CHASSIS																								
		NSII 5MB SLOTS 1-8						s	NS 5M LO 9-1	B TS	3		NSII 5MB SLOTS 17-24						NSII 5MB SLOTS 25-32					
DESCRIPTION	-5Mb	SMb SMb SMb MCB IPU CCD - SMb					SMb	2Mb	2Mb	PU	CCD	1	SMb SMb	2Mb	2Mb	PC PC	CCD		OMC.	2Mb	2Mb	MCB	CCD	1
SLOT # CPU -	1 2	2 3	4	5 6	7	8	9 10	11	12	3 14	15	16	17 11	3 19	20	21 22	23	24	25 2	627	28	29 3	0 31	32
I/O CHASSIS																								
DESCRIPTION	TAPE CNTL.	UI CNTL.	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	BIT SYNC	OPEN	DISC NF	DISC CNTL.	DISC IF	DISC CNTL.	OPEN	OPEN	OPEN	OPEN	BYTE SYNC	OPEN	OPEN	ASYNC EXT	ASYNC F.E.	OPEN	OPEN	BIT SYNC
PRODUCE IDENT.	3202	3401			6304	6303	6203/4	1	3108-2	3108-2	3108-2	3108-2		l	were	lL	6202	1	ļ	6304	6303	ļ	1	6203/4
SLOT # I/O -	1	2	3	4	5	[۳]	7	8	9	10	11	12	13	14	15 15	16	17	18	19	20	21	22	23	24
	CPU PS							(PU	· P:	• s	•			CPU	J P:	}				CP	U F	PS .	

UPGRADE EQUIPMENT

RELOCATED EQUIPMENT

APPENDIX 5. PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS BEFORE AND AFTER MPS ENHANCEMENT

This appendix describes on a site by site basis the location of patch panels, patch panel inserts, battery backup units and input/output (I/O) power supply units before and after the MPS enhancement. Four types of cabinets may exist at an MPS site (depending on their requirements) for storing the aforementioned equipment: 45 IPS tape cabinet, 125 IPS tape cabinet, patch panel cabinet, and an expansion cabinet. The cabinet layouts are described below:

a. 45 IPS Tape Cabinet Layout. A 45 IPS tape cabinet provides eight slots for mounting equipment: slots 1-6 for patch panels; slot 7 for battery backup units (from one to four); and slot 8 for I/O power supply units (from one to four). Patch panels require a complete patch panel slot; whereas patch panel inserts require 1/3 of a patch panel slot.

Patch Panel Slot	#1		•	
Patch Panel Slot	#2		- Annual Control of the Control of t	And the state of t
Patch Panel Slot	#3			
Patch Panel Slot	#4			
Patch Panel Slot	#5			
Patch Panel Slot	#6		1	
Battery Backup Units	#7		•	
I/O Power Supply Units	#8		:	
	,			

b. 125 IPS Tape Cabinet Layout. A 125 IPS tape cabinet contains five patch panel slots. Otherwise it has the same layout as a 45 IPS tape cabinet.

Patch Panel Slot	#1	:		:	
Patch Panel Slot	#2	:		•	
Patch Panel Slot	#3	:		:	
Patch Panel Slot	#4	:		:	
Patch Panel Slot	# 5	:		:	
Battery Backup Units	#6	:	:	:	
I/O Power Supply Units	#7	:	: :	:	

c. Patch Panel Cabinet Layout. The layout of a patch panel cabinet is the same as the layout of a 45 IPS tape cabinet.

d. Expansion Cabinet Layout. An expansion cabinet has four patch panel slots. Otherwise it has the same layout as a 45 IPS tape cabinet.

		•
Patch Panel Slot	#1	
Patch Panel Slot	#2	
Patch Panel Slot	#3	
Patch Panel Slot	#4	
Battery Backup Units	# 5	
I/O Power Supply Units	#6	

The contents of each cabinet at each site before and after MPS enhancement are presented in the figures below. Patch panels are identified by Tandem product identification number. Patch panel inserts are identified by functional type and are shown by their relative position within a patch panel slot. Battery backup units are indicated by a "BBU". I/O power supply units are indicated by a "I/OPS". An "OPEN" indicates that no patch panel, patch panel insert, battery backup unit, or I/O power supply unit is present in a particular cabinet position. An arrow (--->) placed to the right of a patch panel slot, battery backup unit or I/O power supply unit indicates the relocation of equipment from one cabinet/slot to another cabinet/slot or removal to another MPS site or FAA Depot in accordance with appendix 2 herein. underlined battery backup unit (BBU) indicates the relocation of the battery backup unit with a NonStop II to another MPS site in accordance with appendix 2 herein. An underlined I/O power supply unit (I/OPS) at Kansas City, MPS Site # 1, indicates the relocation of the I/O power supply unit to the development system at Kansas City. All patch panel cabinets (with the exception of Kansas City) will be removed in accordance with appendix 2 herein. Due to cable limitations, I/O power supply units may not be placed more than one cabinet away from the system cabinet in which the respective I/O controllers are located. Given this requirement, the fourth, fifth and sixth I/O power supply units for ARTCC and support sites will be placed in the CPU power supply area of the new system cabinets. This I/O power supply placement is noted here, but not graphically described in the following figures.

FIGURE 1-1. KANSAS CITY MPS SITE # 1 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

FOWER SUPPLI UNITS											
SLO	•		ABINET UPGRA		r	SLOT		CABINET LAYOUT UPGRADE)			
# 1	Printer Insert	Op	en	Open	>	# 1	(7	5 0 2)			
2	(7 5	0 1	.)	>	2	(7	5 0 2)			
3	(7 5	0 1	.)		3	(7	5 0 1)			
4	(7 5	0 1	.)		4	(_{17 1} 7	5 0 1)			
5	(7 5	0 1	.)		5	(7	5 0 1)			
6	(7 5	0 4)	>DEV. SYSTEM	6	(7	5 0 1)			
7	BBU	BBU	BBU	BBU	r	7	BBU BBU	U BBU BBU			
8	I/OPS	I/OPS	I/OPS	I/OPS		8 (OPEN I/O	PS I/OPS I/OPS			
SLO			ABINET UPGRA		r	SLOT	(AFTER	CABINET LAYOUT UPGRADE)			
# 1	BitSync Insert			Open	>	# -· 1	6165-1 Insert	6165-1 6100 Insert Insert			
2	(7 5	0 2	?)	>	2	6100 I Insert	BitSync BitSync Insert Insert			
3	(7 5	0 2	2)	>	3		5 0 2)			
4	(7 5	0 1	L)		4	(7	5 0 1)			
5	(7 5	0 1	L)		5	7806	7807 7806			
6	(7 5	0 2	2)	>	6	Open Ope	en Open Open			
7	Open	Open	Open	Open		7	Open Op	en Open Open			
8	Open	Open	Open	I/OPS		Marine State	92.7	englika (n. 1902) 18 maret - Johann Market, der scholler 18 maret - Johann Market, der scholler			

FIGURE 2-1. LOS ANGELES MPS SITE # 2 PLACEMENT OF PATCH PANELS,

PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O

POWER SUPPLY UNITS

	45 IPS !	FAPE BEFO					J T	4!		APE				TUOYAI
SLA #								SLO'	r 	o esso esso esso	o entrios ecuiso ech	* ** **	• •	**************************************
1	(7	5	0	2)		1	(7	5	0	2)
2	(7	5	0	1)	>	2	(7	5	0	2)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4) .	>FAA	6	(7	5	0	1	.)
7	Open	BBU	<u>'</u>	BBU		BBU	DEPOT	7	BBU	BBU	J	BBU	J	BBU
8	Open	Ope	n I	/OP	s 1	OPS		8	Open	I/OF	es :	[/0]	PS	I/OPS
	РАТСН РА	NEL BEFC					r	12	5 IPS :	PAPE FTER				LAYOUT
SL #	OT 	DEFC	'RE	UPG	W)E)			•	LLL	01.	J. W. 3.	,_,	
							E40 443	SLO #	T 	- -	go 4gas 4gas 4		mo esc	1 cm cm cm co tto till
1	(7	5	0	2)	>		6165-: Inser		-	5-1 ert	and what	6100 Insert
2	(Print Inse	er	5 Ope) Open	>	#	6165-	t I	Ins Pri			
		er				,	>	# 1	6165-3 Inser	t I	Ins Pri	ert nte:		Insert
2		er rt	Ope	en		,	>	# 1 2	6165-3 Inser	t I	Ins Pri Ins	ert nte: ert	r.	Insert
2		er rt O	Op∈ P	en E	N	,	>	# 1 2	6165-: Inser 6100 Inser	t 1 t 1 c 7	Inso Pri Inso P	ert nter ert E	r. N	Insert
2 3 4	Inse (er rt O	Ope P P	en E E	n n	,	> >	# 1 2 3	6165-: Inser	t 1 t 1 c 7	Ense Printer Ense P 5	ert nter ert E	r. N 1	Open))
2 3 4 5	Inse ((er rt O O	Ope P P P	en E E E	N N N	,	,	# 1 2 3 4 5	6165-: Inser 6100 Inser ((0 7	Printer Printe	ert nter ert E 0	n 1	Open)) 7806

FIGURE 3-1. ANCHORAGE MPS SITE # 3 PLACEMENT OF PATCH PANELS,

PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O

POWER SUPPLY UNITS

	45	IPS	TAPE EFOR					OUT	45		TAPE				LAYOUT
SL #	ОТ 								SLOT # -						
1		(7	5	0	2)		1	(7	5	0	2)
2		(7	5	0	1)	>	2	(0	P	E	N)
3		(7	5	0	1)		3	(7	5	0	1)
4		(7	5	0	1)		4	(7	5	0	1)
5		(7	5	0	1)		5	(7	5	0	1)
6		(7	5	0	4)	>FAA DEPOT	6	(7	5	0	1)
7	O	pen	Ope	n	BBU		BBU	DEFOI	7	BBU	вв	J	BBU		BBU
8	O	pen	Ope	n I	/OP	s I	/OPS	5	8	Open	I/0I	es j	/OP	s]	I/OPS
SL		CH P	ANEI EFOR					OUT	125 SLOT # -		'APE TER				AYOUT
1									1	6165- Inser			5-1 ert		6100 Insert
2									2	6100 Inser		Op	en		Open
3									3	(0	P	E	N)
4		E	w	P	Т		Y		4	(7	5	0	1)
5		E	M	r	_		1		5	7806	•	780	7		7806
6									6	Open	Ope	n	Ope:	n	Open
7									7	Open	Ope	n	Ope:	n	Open
8															

FIGURE 4-1. CHICAGO MPS SITE # 4 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B	TAPE EFOR					OUT	45	IPS T (AF	APE TER				
SI #	OT					***************************************	en du au	SLOT # -	യ അടി ബോ ബോ ബാ നോ ബോ	<u> </u>	ක ගෙට රුකා ග	e en en en		33 800 MMB RMF RMF GW
1	(7	5	0	2)		1	(7	5	0	2)
2	(7	5	0	1)	∞ ∞ ∞ >	2	(0	P	E	N)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU	<u> </u>	BBU		BBU	DEFOI	7	BBU	BBU	J	BBU		BBU
8	Open	Ope	n I	/OP:	S I	/OP:	5	8	Open	I/01	PS]	I/OP	s 1	OPS
	РАТСН Р (В	ANEI EFOR					OUT	125	IPS T (AF	APE TER				AYOUT
SI #	OT 							SLOT # -				38 9833 4330 AUG	-	
1								1	6165- Inser			55-1 sert		6100 Insert
2								2	6100 Inser		Or	pen		Open
3								3	(o	P	E	N)
4			_					4	(7	5	0	1)
5	E	M	P	T		Y		5	7806		780	07		7806
6								6	Open	Ope	en	0pe	n	Open
7														
8								7	Open	Ope	en i	Ope	n	Open

FIGURE 5-1. ATLANTA MPS SITE # 5 PLACEMENT OF PATCH PANELS,
PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O
POWER SUPPLY UNITS

	45 IPS (B	TAPE EFOR					J'I'	4	5		TAPE FTER					LAYOUT
SL #	OT 				-			SLO #	T 							
1	(7	5	0	2)		1		(7	' !	5	0	2)
2	(7	5	0	1)	>	2		(7	' !	5	0	2)
3	(7	5	0	1)		3		(7		5	0	1)
4	(7	5	0	1)		4		(7	. !	5	0	1)
5	(7	5	0	1)		5		(7		5	0	1)
6	(7	5	0	4) -	>FAA DEPOT	6		(7	,	5	0	1)
7	Open	BBU		BBU		BBU	DEPOI	7		BBU	BB	U	В	BU		BBU
8	Open	Ope	n I	/OP	s :	I/OPS		8	(Open	I/0	PS	I/	OPS	S :	I/OPS
	PATCH P	ANEL EFOR					T	12	5		TAPE FTER					LAYOUT
SL #	OT				_			SLO	T 						_	
ï	(0	P	E	N)		ï		165- nser			55-: ser]	6100 Insert
2	(0	P	E	N)		2		6100 nser		Oj	pen			itSync Insert
3	(0	P	E	N)		3		(0	P	E	1	1)
4	(0	P	E	N)		4		(7	5	0	1	L)
5	(7	5	0	2)	>	5	78	806		780	07		7	7806
6	BitSyn Inser		Ope	n		Open	>	6	Oj	pen	Ope	n	Ope	en	C	pen
7	Open	Ope	n	0pe	n	Open		7	Oj	pen	Ope	n	Ope	en	C	pen
8	Open	Ope	n	0pe	n	Open										

FIGURE 6-1. FT. WORTH MPS SITE # 6 PLACEMENT OF PATCH PANELS,

PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O

POWER SUPPLY UNITS

	45 IPS	TAPE BEFO					UT	45	IPS TAI					AYOUT
SL #	OT				23 6	·	් ණ සහ සො	SLO #					· •==:	ම්පූරු එකේ දැන පාය ණෙක මණ
1	(7	5	0	2)		1	(7	5	0	2)
2	(7	5	0	1)	∞ ∞ ∞ >	2	(7	5	0	2)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU	<u> </u>	BBU		BBU		7	BBU	BBU		BBU	•	BBU
8	Open	Ope	n I	(/OP	s I	I/OPS		8	Open :	I/OP	s 1	/OP	s :	I/OPS
	РАТСН РА	ATT: Y												
	**** OII III	NEL	CAL	BINE	T 1	LAYOU	T	12	5 IPS T	ape	CAL	LINE	T :	LAYOUT
	(BE	NEL FORE					T		(AF	ape Ter				LAYOUT
SL #	(BE						m	SI.O	(AF	TER	UPG		E)	LAYOUT
SL	(BE						T ===>	SIO	(AF: T	TER 6	UPG	RAD	E)	6100 Insert
SL #	(BE 	FORE	UF	PGRA	DE)		T ∞ ∞ ∞ >	SLO #	(AF:	TER 6 I By	UPG 165 nse teS	FRAD 5-1 ert	E)	6100
SL #	(BE 	FORE	5 UF	OGRA	DE)		T >	SLO #	(AF) 6165-1 Insert 6100	TER 6 I By	UPG 165 nse teS	RAD 	E)	6100 Insert
SL # 1	(BE 	FORE 7 0	5 P	O E	DE) 2		₩ ₩ ₩ ₩ >	SLO # 1	(AF) 6165-1 Insert 6100	TER 6 I By	UPG 165 nse tes	FRAD F-1 Frt Sync	E)	6100 Insert
SL # 1	(BE 	FORE 7 0 0 0	5 P	PGRA 0 E	DE) 2 N N Pr))))	£ == == == >	SLO # 1	(AF) 6165-1 Insert 6100	TER 6 1 By 1 0	UPG 165 nse tes nse	GRAD G-1 Grt Gync E O	E) P:	6100 Insert
SL # 1 2	(BE OT (((ByteSyn	FORE 7 0 0 0	5 P P	O E E E	DE) 2 N N Pr))) cinte	£ == == == >	\$1.0 # 1 2	(AFT T 6165-1 Insert 6100 Insert (TER 6 1 By 1 0	165 nse tes nse P	GRAD G-1 Grt Gync E O	P:	6100 Insert rinter Insert
SL # 1 2 3 4	(BE OT (((ByteSyn Insert	FORE 7 0 0 0	5 P P Ope	O E E E	DE) 2 N N Pr N))) rinte	••••> •••••> •••••>	\$1.0 # 1 2 3 4	(AF) T 6165-1 Insert 6100 Insert ((7807	TER 6 1 By 1 0	upo 165 nse tes nse p	GRAD G-1 Gync Gync E O	E) P: N 1	6100 Insert rinter Insert)) 7806

FIGURE 7-1. SAN JUAN MPS SITE # 7 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

SIC #	•	PAPE EFOR:					UT 	45 SLOT	(AF	APE C			LAYOUT)
1	Printer Inser		0pe	en		Open	>	1	(7	5	о :	2)
2	(7	5	0	2)	>	2	(0	P	E I	и)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA	6	(7	5	0	1)
7	Open	BBU		BBU		BBU	DEPOT	7	BBU	BBU	В	BU	BBU
8	Open	Ope	n	I/0	PS	I/OP	s	8	Open	I/OPS	I/	OPS	I/OPS
								125 SLOT	(AF	APE C			LAYOUT
								# -					
								1	6165-1 Insert		.65- ser		Open Insert
								2	6100 Insert		int ser		Open
								3 .	(0	P :	E I	4)
								4	. (0	P	E I	7
								5	7806	7	807		7806
								6	Open	Open	0	pen	Open
								7	Open	Open	ı O	pen	Open

FIGURE 8-1. HOUSTON MPS SITE # 8 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B	TAPE C				T	4!		APE C		T LAYOUT
SL #							SLOT	•		1000 (1000 ALCO) (1000 ALCO)	
1	(7 5	5 0	2)		1	(7	5 0	2)
2	(7 5	5 0	1)	>	2	(7	5 0	2)
3	(7 5	5 0	1)		3	(7	5 0	1)
4	(7 5	5 0	1)		4	(7	5 0	1)
5	(7 5	5 0	1)		5	(7	5 0	1)
6	(7 5	5 0	4) -	>FAA DEPOT	6	(7	5 0	1)
7	Open	BBU	BBU		BBU	DEPOT	7	BBU	BBU	BBU	BBU
8	Open	Open	I/OP	s I	/OPS		8	Open	I/OPS	I/OP	S I/OPS
SL #	PATCH P (B	ANEL C EFORE				-	SLO'	(AF	TER U		T LAYOUT E)
1	Open		Sync sert		inter insert	* euro euro euro >	1	6165-1 Insert		65-1 sert	
2	(7 5	5 0	2		>	2	6100 Insert			BitSync Insert
3	(0 1	E	N)		3	(0	P E	N)
4	(0 1	E	N)		4	(7	5 0	1)
5	(O I	P E	N)		5	7806	7	807	7806
6	(O I	P E	N)		6	Open	Open	O pe	n Open
7	Open	Open	Ope	n	Open		7	Open	Open	Ope	n Open
8	Open	Open	Ope	n	Open						

FIGURE 9-1. JACKSONVILLE MPS SITE # 9 PLACEMENT OF PATCH PANELS,

PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O

POWER SUPPLY UNITS

	45 IPS (B	TAPE EFORE				UT	4		FAPE				LAYOUT
SL #	OT 			_			SLO	T				_	
1	(7	5 0	2)		1	(7	5	0	2)
2	(7	5 0	1)	>	2	(7	5	0	2)
3	(7	5 0	1)		3	(7	5	0	1)
4	(7	5 0	1)		4	(7	5	0	1)
5	(7	5 0	1)		5	(7	5	0	1)
6	(7	5 0	4)	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU	BBU		BBU	DEPOT	7	BBU	BBU	J	BBU		BBU
8	Open	Open	I/OP	S	I/OPS		8	Open	I/OH	PS]	[/OP	S	I/OPS
SL #		ANEL EFORE				UT 	12: SLO:		TAPE FTER				LAYOUT
1	BitSync Insert		pen		Open	>	1	6165-1 Insert		165 Inse	5-1 ert		6100 Insert
2	. (7	5 0	2)	>	2	6100 Insert		Ope	en		itSync Insert
3	(0	P E	N)		3	(0	P	E	N)
4	(0	P E	N)		4 .	(7	5	0	1)
5	(0	P E	N)		5	7806		780	7		7806
6	(0	P E	N	.)	•	6	Open	Ope	n	Ope	n	Open
7	Open	Open	Ope	n	Open		7	Open	Ope	n	Ope	n	Open
8	Open	Open	Ope	n	Open						٠		

FIGURE 10-1. ALBUQUERQUE MPS SITE # 10 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

SL.		TAPE C EFORE			UT	SLO	(AF	APE C		T LAYOUT E)
#				100 AW 400 AW 400 AW 400 A	No 113	#	eas uso eas uso tao est est est e	BEN BEZS BEZS CESP €	ED CO 600 600 600	
1	BitSync Insert		ync ert	ByteSy Inser	nc> t	1	(7	5 0	2)
2	(7 5	0	1)	em en en >	2	(o :	P E	N)
3	(7 5	0	1)		3	(7	5 0	1)
4	(7 5	0	1)		4	(7	5 0	1)
5	(7 5	0	1)		5	(7 !	5 0	1)
6	(7 5	0	4) ·	>FAA	6	(7	5 0	1)
7	Open	BBU	BBU	BBU	DEPOT	7	BBU	BBU	BBU	BBU
8	Open	Open	I/OP	S I/OP	S	8	Open :	I/OPS	I/OP	S I/OPS
SL⁄		ANEL C			UT	12 SLO #	(AF	APE C		T LAYOUT E)
1	(7 5	0	2)	>	1	6165-1 Insert		65-1 sert	6100 Insert
2	(O P	P E	N)		2	6100 Insert		eSync sert	BitSync Insert
3	(O F	E	N)		3	Open		inter sert	BitSync Insert
4	(O P	E	N)		4	(1)
5	(O F	E	N)			-			•
6	Printer Insert	Op	en	Open	ගො සො ගෝ 🗲	5 6	7806 Open		307 Ope:	7806 n Open
7	Open	Open	Open	Open		7	Open	Open	0pe	n Open
8	Open	Open	Open	Open						

FIGURE 11-1. MIAMI MPS SITE # 11 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

SLC #	•		CA E U				T	4! SLO: #	•	APE TER				LAYOUT
1	Printer Insert		Ope	n		Open	>	1	(7	5	0	2)
2	(7	5	0	1)	>	2	(0	P	E	N)
3	(7	5	0	2)	>	3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4) -	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU	•	BBU		BBU	DEFOI	7	BBU	BBU		BBU		BBU
8	Open	Ope	n I	/OP	s I	OPS		8	Open	I/OP	s I	/OP	s I	I/OPS
								12! SLO! #		APE TER				LAYOUT
								1	6165-1 Insert			i-1 ert		6100 Insert
								2	6100 Insert		Ope	n		rinter Insert
								3	(0	P	E	N)
								4	(0	P	E	N)
								5	7806		780	7		7806
								6	Open	Ope	n	0pe	n	Open
								7	Open	Ope	n	0pe	n	Open

FIGURE 12-1. OAKLAND MPS SITE # 12 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B)	FAPE					UT	4	45 IPS T. (AF	APE TER				LAYOUT
SL#							· සං සං	SIA #)T	ളോ ഇരായത	C139 CTD GE	0 000 623 600°		යා සහ සො සො සා ශාෂ
1	(7	5	0	2)		1	(7	5	0	2)
2	(7	5	0	1)	econ ccar cosc >>	2	(7	5	0	2)
3	(7	5	0	2)	em em em >	3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU		BBU		BBU	DEPOI	7	BBU	BBU		BBU		BBU
8	Open	Ope	n :	I/OP:	s :	I/OPS	}	8	Open	I/OP	s I	/OP	s I	I/OPS
					11		·	12 SIA #		APE TER				LAYOUT
								1	6165-1 Insert		165 nse		3	6100 [nsert
								2	6100 Insert		op∈	en '		Open
								3	(O	P	E	N)
								4	(o	P	E	N)
								5	7806		780)7		7806
								6	Open	Ope	n	Ope	n	Open
								7	Open	Ope	n	Ope	n	Open

FIGURE 13-1. MEMPHIS MPS SITE # 13 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

SLO'	•	rape Efori					T	4! SLO!	(AFI	APE CA			AYOUT
#							_	1	(7 5	5 0	2)
1	(7	5	0	2)		_					,
2	(7	5	0	1)	>	2	(O I	E	N)
3	(7	5	0	1)		3	(7 5	5 0	1)
4	(7	5	0	1)		4	(7 5	5 0	1)
5	(7	5	0	1)		5	(7 5	5 0	1)
6	7806		780	7		7806	>	6	(7 5	5 0	1) .
7	Open	BBU		BBU		BBU		7	BBU	BBU	BBU	Ī	BBU
8	Open	I/OP	s I	[/OP	s]	[/OPS		8	Open :	I/OPS	I/OF	s :	I/OPS
SLO	•	ANE L EFOR					T	SLO	•	APE C			LAYOUT
# 1	(0	P	E	N)		# 1	6165-1 Insert	610 In:	55-1 sert		6100 Insert
2	(0	P	E	N)		2	6100 Insert	Oj	pen		Open
3	(0	P	E	N)		3	(7 !	5 0	1)
4	(0	P	E	N)		4	(7	5 0	1)
5	(0	P	E	N)		5	7806	7	307		7806
6	(7	5	0	1	.)	>	6	Open	Open	Ope	en	Open
7	Open	Ope	n	Ope	n	Open		7	Open	Open	Ope	en	Open
8	Open	Ope	n	Ope	n	Open							

FIGURE 14-1. SEATTLE MPS SITE # 14 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B)	FAPE EFORE					UT			APE TER				LAYOUT
SLO #	OT 				•			SLOT	r 	, 73 6 00 020	• काक्र ब ह्य था	ෙනෙක අත කෙර	, aco 1	ජ ලදා දෙදා දේශා මිතර ජාතා සංභා
1	(7	5	0	1)	>	1	(7	5	0	2)
2	(7	5	0	2)	>	2	(0	P	E	N)
3	BitSync Insert	Pri Ir	.nt	ert		Open	>	3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU		BBU		BBU	DEFOI	7	BBU	BBU	Ī	BBU	Ī	BBU
8	Open	Oper	1	1/0	PS	I/OP	S	8	Open :	I/OP	s I	/OP	s :	I/OPS
								129 SLO9	•	APE L'ER				LAYOUT
								1	6165-1 Insert		165 nse	5-1 ert		6100 Insert
						•		2	6100 Insert		int nse	er ert		itSync Insert
								3	(0	P	E	N)
								4	(0	P	E	N)
								5	7806		780)7		7806
								6	Open	0pe	èn	Ope	n	Open
						•		7	Open	0pe	n	Ope	n	Open

FIGURE 15-1. HONOLULU MPS SITE # 15 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS T	APE FOR					T	45	IPS T	TAPE TER				AYOUT
SL4	•					· 	· -	SLOT # -						
1	(7	5	0	1)	>	1	(7	5	0	2)
2	(7	5	0	2)	>	2	(0	P	E	N)
3	BitSync Insert		0pe	n		Open	>	3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4) -	>FAA DEPOT	6	(7	5	0	1)
7	Open	BBU	<u> </u>	BBU		BBU	DEFOI	7	BBU	BBU	J	BBU		BBU
8	Open	Ope	n I	/OP	s :	I/OPS		8	Open	I/0I	es :	I/OP	s :	[/OPS
								125		FAPE				LAYOUT
								SLOT	•					
								1	6165-		616! [ns	5-1 ert		6100 Insert
								2	6100 Inser		Ope	en		itSync Insert
								3	(0	P	E	N)
								4	(0	P	E	N)
						•		5	7806		78	07		7806
								6	Open	Ope	en	Ope	n	Open
								7	Open	Ope	en	Ope	n	Open

FIGURE 16-1. SALT LAKE CITY MPS SITE # 16 PLACEMENT OF PATCH
PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O
POWER SUPPLY UNITS

		TAPE EFORE			LAYO	UT	45	IPS T	APE C			AYOUT
SI #	OT					-	SLOT # -		ഇവരായാ	മാമോയാക്കാവ	, , ,	් ජීා අතුරු අතුරු වසට එකට කො
1	(7	5 0	1)	>	1	(7 !	5 0	2)
2	. (7	5 0	2)	>	2	(0 1	E	N)
3	(7	5 0	1)		3	(7 :	5 0	1)
4	(7	5 0	1)		4	(7 !	5 0	1)
5	(7	5 0	1)		5	(7 5	5 0	1)
6	(7	5 0	4)	>FAA DEPOT	6	(7 !	5 0	1)
7	Open	Open	BB	J	BBU	DEFOI	7	BBU	BBU	BBU	í	BBU
8	Open	Open	I/O	PS :	I/OPS		8	Open	I/OPS	I/OF	s I	OPS
SI #	PATCH P (B OT	ANEL EFORE				UT 	125 SLOT		APE CA			AYOUT
1	Open		Sync sert		Open	>	1	6165-1 Insert		55-1 sert		6100 Insert
2	(0	P E	N)		2	6100 Insert		oen		tSync Insert
3	(0	P E	N)		3	(0 1	E	N)
4	(0	P E	N)		4	(. 7 .	5 0	1)
5	(0	P E	N)		5	7806	78	307		7806
6	(0	P E	N	•)		6	Open	Open	0pe	n	Open
7	Open	Open	Ope	en	Open		7	Open	Open	Ope	n	Open
8	Open	Open										

FIGURE 17-1. DENVER MPS SITE # 17 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

,	45 IPS T	APE FORI					T		•	PE CA			TUOYA
SLO #	OT						-	SLOT	[
1	(7	5	0	1)	>	1	(7 9	5 0	2)
2	(7	5	0	2)	>	2	(0 1	E	N)
3	(7	5	0	1)		3	(7 !	5 0	1)
4	(7	5	0	1)		4	(7 !	5 0	1)
5	(0	P	E	N)		5	(7 !	5 0	1)
6	(7	5	0	4) -	>FAA	6	(7	5 0	1)
7	BBU	BBU		BBU		BBU	DEPOT	7	BBU	BBU	BBU	J	BBU
8	Open	Ope	n I	/OP	s I	OPS		8	Open 1	I/OPS	I/OF	PS]	I/OPS
SL	•	VEL FORE					i	12	5 IPS TI	APE C			LAYOUT
ш	WI.						_	SLO'	•				
# 1	(0	 P	 Е	N.)	-	SLO' # 1	•	61			6100 Insert
		 0 0	 Р Р	 Е Е	N N		-	# .	T 6165-1	61: In: Pri:	 55-1 sert		
1								# 1	6165-1 Insert	61: In: Pri: In:	 55-1 sert nter		Insert itSync
2		0	P	E	N		-	# 1 2	6165-1 Insert	61 In: Pri: In:	55-1 sert nter sert	B:	Insert itSync
2		0 0 0 Bi	P P	E E E	n n n		>	# 1 2	6165-1 Insert	61 In: Pri: In: O	55-1 sert nter sert	B:	Insert itSync
1 2 3 4	(((Printer	O O Bi	P P P	E E E	N N)	>	# 1 2 3 4	6165-1 Insert 6100 Insert ((7806	61 In: Pri: In: O	officient of the sert of the s	Barrier N	Insert itSync Insert))
1 2 3 4 5	(((Printer Insert	o o o Bi I	P P P tsy nse	E E encert	N N N)))) Open	>	# 1 2 3 4 5	6165-1 Insert 6100 Insert ((7806	61 In: Pri: In: O :	ope	Bi Bi N N	Insert itSync Insert)) 7806

FIGURE 18-1. MINNEAPOLIS MPS SITE # 18 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

		TAPE EFORE				UT			APE CA			LAYOUT
SL¢ #	OT 			_		-	SLO #	T 	ಮಾರ್ಥ ಜಿಲ್ಲಾ ೯ ೯೧೦ ಕೆಳೆಯ ಸ್	ന് ബോ പോ അ	ecoe	අඩුර් සාහා සොක කො කො සොම
1	(7	5 0	2)		1	. (7 5	5 0	2)
2	(7	5 0	1)	>	2	(0 1	E	N)
3	(7	5 0	1)		3	. (7 5	5 0	1)
4	(7	5 0	1)		4	(7 5	5 0	1)
5	(7	5 0	1)		5	(7 5	5 0	1)
6	(7	5 0	4) -	>FAA DEPOT	6	(7 5	5 0	1)
7	Open	BBU	BBU	Ī	BBU		7	BBU	BBU	BBU		BBU
8	Open	Open	I/OF	s :	I/OPS		8	Open	I/OPS	I/OP	s :	I/OPS
	PATCH P	ANEL EFORE				UT	12	5 IPS T	APE CA			LAYOUT
SL¢							SLO		TEN OI	GEURD	ار مند 	
" 1	(0	P E	N			# 1	6165-1	<i>6</i> 14	55-1		6100
_	(O	F E	14)		1	Insert		sert		Insert
2	(0	Р Е	N)		2	6100 Insert		Sync sert		Open
3	Open	Ope	n E		eSync sert	em 40 to >	3	(O I	E	N)
4	(0	P E	N)		4	(7 5	5 0	1)
5	(0	P E	N			5	7806	78	307		7806
6	(0	P E	N)		6	O pen	open	Ope	n	Open
7	Open	Open	0pe	n	Open		7	Open	Open	Ope	n	Open
8	Open	Open	Ope	n	Open							

FIGURE 19-1. INDIANAPOLIS MPS SITE # 19 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

SLA		FAPE EFOR					SLA #		TAPE TTER				LAYOUT
1	(7	5	0	1)>	1	(7	5	0	2)
2	(7	5	0	2)>	2	(0	P	E	N)
3	(0	P	E	N)	3	(7	5	0	1)
4	(7	5	0	1)	4	(7	5	0	1)
5	(7	5	0	1)	5	(7	5	0	1)
6	(7	5	0	4)>FAA		(7	5	0	1)
7	Open	BBU		BBU		DEPOT BBU	7	BBU	вви	J	BBU	ſ	BBU
8	Open	Ope	n I	/OP	s :	I/OPS	8	Open	I/OI	s I	/OP	s I	I/OPS
							12 SLC #		TAPE TER				LAYOUT
							1	6165-1 Insert			-1 ert		6100 Insert
							2	6100 Insert	<u>:</u>	Ope	n ·		Open
							3	(0	P	E	N)
							4	(0	P	E	N)
							5	7806		780	7		7806
			•			•	6	Open	Ope	n	Ope	n	Open
							7	Open	Ope	n	0pe	n	Open

FIGURE 20-1. CLEVELAND MPS SITE # 20 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS 7	IAPE EFOR					UT	•	45	IPS T	APE TER				TUOYAL
SL #	OT 							SL #	OT 						
1	(7	5	0	1)	>	1		(7	5	0	2)
2	(7	5	0	2)		2		. (7	5	0	2)
3	(7	5	0	2)	>	3		(7	5	0	1)
4	(7	5	0	1)		4		(7	5	0	1)
5	(7	5	0	1)		5		(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6		(7	5	0	1)
7	Open	BBU		BBU		BBU		7		BBU	BBU		BBU		BBU
8	Open	Ope	n I	/OP	s I	OPS		8		Open :	I/OP	s 1	/OP	s :	I/OPS
								1: SL		IPS T	APE FER				LAYOUT
								1		6165-1 Insert			i-1 ert		6100 Insert
								2	-	6100 Insert	ı	9q0	en ·		Open
								3		(0	P	E	N)
								4		(0	P	E	N)
								. 5		7806		780	7		7806
			,					6		Open	Ope	n	Ope	n	Open
								7		Open	Ope	n	Ope	n	Open

FIGURE 21-1. WASHINGTON MPS SITE # 21 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B	TAPE EFOR					OUT	4	5 IPS T (AF	APE TER				AYOUT
SL #	OT	=						SLO #	T					
1	(7	5	0	2)		1	(7	5	0	2)
2	Open		0pe	n		tSy: nse:	nc> rt	2	(0	P	E	N)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(0	P	E	N)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	(0	P	E	N)
7	Open	BBU	<u>r</u>	BBU	,	BBU	DEFOI	7	BBU	BE	3U	BB	U	BBU
8	Open	Ope	n I	/OF	s I	/OP	S	8	Open	I/C	PS	I/O	PS	I/OPS
								12	5 IPS T					LAYOUT
								SLO #		TER 	UPO	GRAD)E) 	
								1	6165-1 Insert			5-1 ert		6100 Insert
								2	6100 Insert		Ope	en		itSync Insert
								3	(0	P	E	N)
								4	(0	P	E	N)
								5	7806		780	07		7806
								6	Open	Ope	en	0pe	n	Open
								7	Open	Ope	n	Ope	n	Open

FIGURE 22-1. NEW YORK MPS SITE # 22 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS	TAPE EFOR					OUT	4	45		APE TER				LAYOUT
SL #					_			SLC #	T 					· -	·
1	(7	5	0	1)	>	1		(7	5	0	2)
2	(7	5	0	2)		2		(7	5	0	2)
3	(7	5	0	2)	>	3		(7	5	0	1)
4	(7	5	0	1)		4		(7	5	0	1) ·
5	(7	5	0	1)		5		. (7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6		(7	5	0	1)
7	Open	BBU		BBU		BBU	DEFOI	7		BBU	BBU	ī	BBU	Ī	BBU
8	Open	Ope	n I	/OP	s :	I/OPS	5	8		Open :	I/OF	s I	(/OP	S	I/OPS
								12 SLC #			APE TER				LAYOUT
								1		165-1 nsert		165 nse			6100 Insert
								2		6100 nsert		Ope	en ·		Open
								3		(0	P	E	N)
								4		(0	P	E	N)
								5		7806		780	7		7806
								6		Open	Ope	n	0pe	n	Open
								7		Open	Ope	n	Ope	n	Open

FIGURE 23-1. BOSTON MPS SITE # 23 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS	TAPE SEFOR					UT	•	45 IPS T	APE TER				LAYOUT
SL#								SIA #					JE) 	
1	(0	P	E	N)		1	(7	5	0	2)
2	(7	5	0	1)	>	2	(7	5	0	2)
3	(0	P	E	N)		3	(7	5	0	1)
4	(0	P	E	N)		4	(7	5	0	1)
5	(0	P	E	N)		5	(7	5	0	1)
6	(0	P	E	N)		6	(7	5	0	1)
7	Open	Ope	n	Ope	n	Open		7	BBU	BBU	J	BBU	Ţ	BBU
8	Open	Ope	n	Ope	n	Open		8	Open	I/OF	s :	[/OF	S	I/OPS
SLO		ANEL					UT	SLC		APE TER				LAYOUT
SLO # 1	(BE	FORE		PGRA	DE)		UT >		(AF	TER 6	UP0)E)	LAYOUT 6100 Insert
#	(BE	FORE	UI	PGRA	DE)		UT > >	SLC #	(AF T 6165-1	TER 6 I	UP0	GRAD 5-1 ert)E)	6100
# 1	(BE	FORE 7	UI 5	PGRA 0	DE) 1)	UT > >	SLC # 1	(AF DT 6165-1 Insert 6100	TER 6 I	UPO 165 inse	GRAD 5-1 ert)E)	6100 Insert
# 1 2	(BE	FORE 7 7	UI 5	PGRA 0 0	DE) 1 2)	UT>>>	SLC # 1	(AF DT 6165-1 Insert 6100	TER 6 I	UPO	GRAD 5-1 ert en	PE)	6100 Insert
# 1 2	(BE	FORE 7	UI 5 5	O 0	DE; 1 2 2)	UT>>>>	SLC # 1	(AF DT 6165-1 Insert 6100	TER 6 1	UPO 165 Inse Ope	GRAD 5-1 ert en E	DE)	6100 Insert
# 1 2 3 4	(BE)	FORE 7 7 7	5 5 5 5	O O O	DE; 1 2 2 1)	>>>>>	SLC # 1 2 3	(AF 0T 6165-1 Insert 6100 Insert ((7806	TER 6 1	UP(GRAD G-1 Grt en E 0	DE) N 1	6100 Insert Open)) 7806
# 1 2 3 4 5	(BE)	FORE 7 7 7 7	5 5 5 5 5	O 0 0 0 0	DE; 1 2 2 1)	>>>>	SLO # 1 2 3 4	(AF) 0T 6165-1 Insert 6100 Insert ((7806 Open	TER 6 1 0 7	UPC 	GRAD 5-1 ert en E 0	PE) N 1	6100 Insert Open)) 7806 Open

FIGURE 24-1. FAA HEADQUARTERS MPS SITE # 24 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B	TAPE EFOR					UT		45 IPS T (AF	APE (TUOYA
SI	OT TO					•		SL	•				•	
#								#					-	
1	(0	P	E	N)		1	6165-1 Insert			-1 rt	_	165-1 nsert
2	(0	P	E	N)		2	6165-1 Insert		610 nse	6 rt		6106 nsert
3	Printer Insert			nc		itSyn Inser		3	Printer Insert			nc		tsync nsert
4	(0	P	E	N)		4	(0	P	E	N)
5	(0	P	E	N)		5	(0	P	E	N)
6	(0	P	E	N)		6	7806	•	780	7		7806
7	Open	Ope:	n	Ope	n	Open	ı	7	Open	0pe	n	Ope:	n	Open
8	Open	Ope:	n	Ope	n	Open	1	8	Open	0pe	n	Ope:	n	Open
SI #	125 IPS (B	TAPE EFOR					OUT	1 SL #		APE				TUOYA
1	(7	5	0	2)		1	(7	5	0	2)
2	(0	P	E	N)		2	(0	P	E	N)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	. (7	5	0	1)
6	(7	<u>5</u>	0	4)	>FAA DEPOT	6	. (7	5	0	1)
7	Open	BBU		BBU		BBU	DEPUT	7	BBU	BBU		BBU		BBU
8	Open	Ope	n I	/OP	s I	I/OPS	5	8	Open	I/OP	s I	/OP	s I	/OPS

FIGURE 24-1. FAA HEADQUARTERS MPS SITE # 24 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, BATTERY BACKUP AND I/O POWER SUPPLY UNITS (CONT'D)

EXPANSION CABINET LAYOUT (AFTER UPGRADE)

SL #	OT 				
1	6106 Insert		106 sert	61 Ins	
2	6106 Insert		106 sert	61 Ins	
3	7806	7	807	78	06
4	(7	8 0	8)
5	Open	BBU	BBU	J BBI	U
6	Open	I/OPS	1/0	PS I/	OPS

FIGURE 25-1. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS (DELIVERY 1)

4		rape Efor				LAYO	UT	45		APE TER				AYOUT
SLOT # -	•							SLOT						
1	(7	5	0	1)	>	1	(7	5	0	2)
2	(7	5	0	2)	>	2	(0	P	E	N)
3	(0	P	E	N)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA	6	(7	5	0	1)
7	Open	BBU		BBU	•	BBU	DEPOT	7	BBU	BBU	Ī	BBU		BBU
8	Open	Ope	n I	/OP	s I	OPS	3	8	Open	I/OF	s I	/OP	s I	/OPS

125	IPS TA	PE C				AYOUT
SLOT	[
1	6165-1 Insert		-	5-1 ert]	6100 Insert
2	6100 Insert	C	op€	en		Open
3	(0	P	E	N)
4	7806	•	780	7		7806
5	(7	8	0	8	,
6	Open	Ope	n	Ope	n	Open
7	Open	Ope	n.	Ope	n	Open

FIGURE 25-2. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25
PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY
BACKUP AND I/O POWER SUPPLY UNITS (DELIVERY 2)

	45 IPS !								45		rape rer 2				AYOUT
SL #	OT				_			SLA #	OT 						
1	(7	5	0	2)		1		(7	5	0	2)
2	(0	P	E	N)		2		(0	P	E	N)
3	(7	5	0	1)		3		(7	5	0	1)
4	(7	5	0	1)		4		(7	5	0	1)
5	(7	5	0	1)		5		(7	5	0	1)
6	(7	5	0	1)		6		(7	5	0	1)
7	BBU	BBU		BBU		BBU		7	I	BU	BBU		BBU		BBU
8	Open 1	/OP	s I	/OP:	3]	I/OPS		8	C	pen	I/OPS	S I	/OP	S I	/OPS
SLA	125 IPS 1 (BEFO							12 SLC			'APE (AYOUT E)
1	6165-1 Insert		616! Inse	5-1 ert		6100 Insert		1		165-1 nsert		l65 ise	-1 rt		6100 nsert
2	6100 Insert	•	Ope	en		Open		2		100 sert		pe	n		06P/P nsert
3	(0	P	E	N)	•	3		.06P/ inser					06P/P nsert
4	7806	-	7807	7		7806		4	7	806	7	80	7	•	7806
5	(7	8	0	8)		5	•	(7	8	0	8)
6	Open	Oper	n (pen	1	Open		6	0	pen	Open	1 (Oper	n (Open
7	Open	Oper	n (pen	l	Open		7	0	pen	Open	ı (per	n (Open

FIGURE 25-2. FAA TECHNICAL CENTER (ACT-110) MPS SITE # 25
PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY
BACKUP AND I/O POWER SUPPLY UNITS (DELIVERY 2) (CONT'D)

	EXPANSI (AFT	ON CAI			
SLO #	•				
1	6165-1 Insert				
2	(O I	E	N)
3	(0 1	. E	N)
4	7806	78	307	i	7806
5	BBU	BBU	BBU	:	BBU
6	BBU	I/OPS	I/OP	S I,	OPS

FIGURE 26-1. FAA TECHNICAL CENTER (ASM-160) MPS SITE # 26
PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY
BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS (B)	FAPE EFOR					4	45 IPS TA (AF)	APE (TUOY
SL	OT				_		SLO #	OT 					
1	(7	5	0	2)	1	(7	5	0	2)
2	Printer Insert	(Ope	en		itSync nsert	2	Printe Insert	r (Ope:	n		sync sert
3	(7	5	0	1)	3	(7	5	0	1)
4	(7	5	0	1)	4	(7	5	0	1)
5	(7	5	0	1)	5	(7	5	0	1)
6	(7	5	0	4)>FAA	6	(7	5	0	1)
7	Open	BBU		BBU		DEPOT BBU	7	BBU	BBU		BBU	В	BU
8	Open	Ope	n	1/0	PS	I/OPS	8	Open 1	[/OP:	S I,	/OPS	I/	OPS
							SLO		APE (CER I				YOUT
							# 1	6165-1 Insert			 -1 rt		100 sert
							2	6100 Insert			-1 rt		65-1 sert
							3	7806	•	780	7	7	806
							4	6106P/I Insert		106) nse:		0	pen
							5	7806	•	780°	7	7	806
							6	Open	Oper	n 1	BBU	В	BU
							7	Open	Oper	n (Open	0	pen

FIGURE 27-1. MIKE MONRONEY AERONAUTICAL CENTER (AAC-940) MPS SITE # 27 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	45 IPS T	APE C				UT		IPS TA (AFT					AYOUT
SL #	OT 						SLOT # -						
1	(7 5	0	2)		1	(7	5	0	2)
2	BitSync Insert				Open	ı >	2	(7	5	0	1)
3	(7 5	0	1)		3	(7	5	0	1)
4	(7 5	0	1)		4	(7	5	0	1)
5	(7 5	0	1)		5	(7	5	0	1)
6	(7 5	0	4)	>	6	(0	P	E	N)
7	Open	BBU	BBU		BBU		7	Open	Ope	n	BBU		BBU
8	Open	Open	I/OF	?S	I/OF	PS	8	Open 1	[/OF	s I	/OP	s I	(OPS
							SLOI	•	APE FER				LAYOUT
							# -			_			
							1	6165-1 Insert		Ope	en		6100 Insert
							2	Open	ϵ				106P/P Insert
							3	Bitsyne Inser			nter sert		Open
							4	(0	P	E	N)
					•		5	7806		780	07		7806
							6	BBU	вв	J	BBU	Ť	BBU
							7	Open	Ope	en	Ope	n	Open

FIGURE 28-1. MIKE MONRONEY AERONAUTICAL CENTER (ASM-150) MPS SITE # 28 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	:			<u> </u>		210110			MER DOLLE				
	125 IPS '	TAPE EFOR					UT	1	25 IPS TA	PE CAI			AYOUT
SL	•			1 011		,		SL	•			-,	
#								#					
1	(0	P	E	N)		1	6165-1				Open
									Insert	Inse	ert	I	nsert
2	Open		tsy			tSyn		2	Open	Bitsy			tSync
		I	nse	rt	I	nser	t			Inse	ert	I	nsert
3	(0	P	E	N)		3	6106P/P				Open
									Insert	Ins	sert		
4	(7	5	0	1)		4	(7 5	0	1)
5	(7	5	0	1)		5	. (7 5	0	1)
6	(7	5	0	4)	>FAA	6	7806	780)7	4	Open
7	Open	Ope	n	BBU		BBU	DEPOT	7	BBU	BBU	BBU		BBU
•	Open	Ope	11	DDO		DDO		,	DD 0 .	DDO	DDO		DDO
8	Open	Ope	n I	/OP	S I	/OPS		8	Open I	OPS 1	(/OP	S I	/OPS
										EL CAI			AYOUT

O P E N

- 5 (O P E N)
- 6 (OPEN)
- 7 Open Open Open Open
- 8 Open Open Open Open

FIGURE 29-1. DALLAS/FT. WORTH MPS SITE # 29 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

12	5 IPS 1	r <mark>ape</mark> Efor					ľ	125	IPS T		CAB UPG			LAYOUT
SLOT # -	•					· 	-	SLOT # -	•					
1	(7	5	0	2)		1	(7	5	0	2)
2	(7	5	0	1)		2	(7	5	0	1)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	7806		780	7		Open
7	Open	Ope	n	BBU		BBU		7	BBU	BBU	J	BBU		BBU
8	Open	0pe	n I	/OP	s I	I/OPS		8	Open	Ope	en I	/OP	s 1	I/OPS

FIGURE 30-1. MEMPHIS MPS SITE # 30 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS (R	TAPE EFOR					OUT	12						LAYOUT
SL						·		SLO		TER 	UPG	RAL)E) 	
1	Open		tsy nse			tSy Inse		1	Open		tSy nse			tSync Insert
2	(7	5	0	2)		2	(7	5	0	2)
3	(7	5	0	1)		3	(7	5	0	1)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	7806		780	7		Open
7	Open	Ope	n	BBU		BBU		7	BBU	BBU		BBU		BBU
8	Open	Ope	n I	/OP	S I	/OP	5	8	Open	0pe	n I	/OP:	s I	/OPS

FIGURE 31-1. NORFOLK MPS SITE # 31 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS T	APE FORI					1	25 IPS T	APE LER				AYOUT
SL #	•						SI #	OT					
1	Printer Insert		tSy: nse:			tSync nsert	1	Printe Insert					tSync Insert
2	(7	5	0	2)	2	(7	5	0	2)
3	(7	5	0	1)	3	(7	5	0	1)
4	(7	5	0	1)	4	(7	5	0	1)
5	(7	5	0	1)	5	(7	5	0	1)
6	(7	5	0	4)>FAA DEPOT		7806		780	7		Open
7	Open	0per	n . 1	BBU		BBU	7	BBU	BBU		BBU		BBU
8	Open	Opei	n I,	OP	s I	/OPS	8	Open	Ope	n I	/OP	s I	OPS

FIGURE 32-1. WINDSOR LOCKS MPS SITE # 32 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS T	APE FORI					UT	12	25 IPS T	APE LER				AYOUT
SL #	•				- -	., 		SLO #	•					
1	(0	P	E	N)		1	(0	P	E	N)
2	Printer Insert		tSy nse			tSyr nser		2	Printe: Inser					tSync nsert
3	(0	P	E	N)		3	(0	P	E	N)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	7806		780	7		Open
7	Open	Ope	n.	BBU		BBU		7	BBU	BBU	ſ	BBU		BBU
8	Open	Opei	n I	/OP	s I	/OPS	5	8	Open	Ope	n I	/OP	s I	/OPS

FIGURE 33-1. DETROIT MPS SITE # 33 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS 1				ET 1 ADE)		OUT	12	5 IPS T					AYOUT
SL #								SLO #		TER 	UPG	RAD	E) 	
1	(0	P	E	N)		1	(0	P	E	N)
2	Printer Insert		tSy nse		Bit Ir	:Sy:		2	Printe: Inser		tSy nse			tSync nsert
3	(0	P	E	N)		3	(0	P	E	N)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	7806		780	7		Open
7	Open	Ope	n 1	BBU	В	BU		7	BBU	BBU	,	BBU		BBU
8	Open	Ope	n I,	/OP	5 I/	OPS	3	8	Open	Ope	n I,	/OP	S I	/OPS

FIGURE 34-1. ST. LOUIS MPS SITE # 34 PLACEMENT OF PATCH PANELS,

PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O

POWER SUPPLY UNITS

	45 IPS	TAPE EFOR					45			ABINE PGRAD	T LAYOUT
SL #	от 				,	SLOT # -	•				
1	ByteSyn Insert		Ope	n	!	0pen	1 F	ByteSyn Insert		pen	Open
2	(0	P	E	N)	2	(0	PE	N)
3	.(7	5	0	2)	3	• (7	5 0	2)
4	(7	5	0	1)	4	• (7	5 0	1)
5	(7	5	0	1) ·	5	. (7	5 0	1)
6	(. 7	5	0,	4)>FAA DEPOT	6	7806	7	807	0pen
7	Open	Ope	n	BBU	•	BBU	7	BBU	BBU	BBU	BBU
8	Open	0pe	n I	/OP	s I,	/OPS	8	Open	Open	I/OP	S I/OPS

FIGURE 35-1. WICHITA MPS SITE # 35 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS	TAPI EFOR	E CA	ABIN	ET	LAYOUT		12	5 IPS T	APE	CAI	BINE	T I	AYOUT
SL #	OT	SLC #	(AF T 	TER	UPO	RAC	E) 							
1	(0	P	E	N)		1	(0	P	E	N)
2	Printer Insert		tsy nse			tSync nsert		2	Printe Inser	r Bi t I	tSy nse	nc		tSync nsert
3	(7	5	0	2)		3	(7	5	0	2)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4	•	->FAA DEPOT	6	7806		780	7	(0pen
7	Open	Ope	n	BBU	:	BBU		7	BBU	BBU		BBU	:	BBU
8	Open	Ope	n I	/OP:	S I,	OPS		8	Open	Ope	n I	/OP	S I,	OPS

FIGURE 36-1. DENVER MPS SITE # 36 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

			ABINET UPGRAD	LAYOUT E)	125	IPS T	APE CA			AYOUT
SL #					SLOT # -					
1	(O P	E N)	1	, , , (, O I	E	N)
2	Printer Insert			itSync Insert	2	Printe Inser	r Bits t Ins			tSync nsert
3	(7 5	0 2)	3	(7 5	5 0	2)
4	(7 5	0 1)	4		7 5	5 0	1)
5	(7 5	0 1)	5	(, 7 , 5	5 0	1)
6	(7 5	0 4)>FAA DEPOT	6	7806	78	307		Open
7	BBU	BBU	BBU	BBU	7	BBU	BBU	BBU		BBU
8	Open	Open	I/OPS	I/OPS	8	Open	Open	I/OP	s I	/OPS
SL			ABINET UPGRAD		45 SLOT		APE CA			TUOYA
#					# -					
1	(O P	E N)	1	(0 1	? E	N)
2	• (7 5	0 2)	3	(7 5	5 0	2)
3	(7 5	0 2)	3	(7 5	5 0	2)
4	(7 5	0 1)	4	(7 5	5 0	1)
5	(7 5	0 1)	5	(7 5	5 0	1)
6	(7 5	0 4			(o :	P E	N)
7	Open	Open	Open	DEPOT Open	7	Open	Open	Ope	n	Open

FIGURE 37-1. EDWARDS MPS SITE # 37 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS 1	IAPE EFOR					125 IPS TAPE CABINET LAYOUT (AFTER UPGRADE)							
SL #			SL #	TO.				·						
1	(0	P	E	N)		1	(0	P	E	N)
2	Printer Insert		tSy nse			Ope	n	2	Printer Insert		tsy nse		0	pen
3	(0	P	E	N)		3	(0	P	E	N)
4	(7	5	0	1)		4	(7	5	0	1)
5	(7	5	0	1)		5	(7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	7806		780	7		Open
7	Open	Ope	n	BBU		BBU		7	BBU	BBU		BBU		BBU
8	Open	Ope	n I	/OP	s 1	(/OP	5	8	Open	Ope	n I	/OP	s I	/OPS

FIGURE 38-1. FAIRBANKS MPS SITE # 38 PLACEMENT OF PATCH PANELS, PATCH PANEL INSERTS, AND BATTERY BACKUP AND I/O POWER SUPPLY UNITS

	125 IPS 7	rape Efor					125 IPS TAPE CABINET LAYOUT (AFTER UPGRADE)							
SI #	ОТ			SL¢	•									
1	Printer Insert		tSy nse			tSyi nsei		1	Printe Inser			-		itSync Insert
2	(7	5	0	2)		2	Ċ	7	5	0	2)
3	(7	5	0	1)		3	(7	5	0	1)
4	(0	P	E	N)		4	;	0	P	E	N)
5	(7	5	0	1)		5	. (7	5	0	1)
6	(7	5	0	4)	>FAA DEPOT	6	7806		780	7		Open
7	Open	Ope	n	BBU		BBU		7	BBU	BBU	•	BBU		BBU
8	Open	Ope	n I	/OP	s I	/OPS	5	8	Open	Ope	n I	/OP	s :	I/OPS

APPENDIX 6. LIST OF ACRONYMS

AAC-400	FAA Depot, Mike Monroney Aeronautical Center
AAC-480	Supply Management Branch, FAA Depot
AAC-900	FAA Academy, Mike Monroney Aeronautical Center
AAC-940	Airway Facilities Branch, FAA Academy
AAF	Associate Administrator for Airway Facilities
AAF-2	Deputy Associate Administrator for Airway Facilities
AC	alternating current
ACCC	Area Control Computer Complex
ACT-100	Engineering Division, FAA Technical Center
ACT-110	Flight Information Systems Branch, Engineering Division, FAA Technical Center
ADCCP	Advanced Data Communication and Control Procedure
AF	Airway Facilities
AFS	Airway Facilities Sector
ALG	Acquisition and Materiel Service
ALG-300	Contracts Division, Acquisition and Materiel Service
ALG-310	Air Traffic Control/Flight Information Branch, Contracts Division
ANSI	American National Standard Institute
APS	Program Engineering Service
APS-1	Director, Program Engineering Service

APS-100	Facilities Integration Division, Program Engineering Service
APS-400	Navigation/Landing and Facility Monitoring Division, Program Engineering Service
APS-410	Software and Program Support Program, Navigation/Landing and Facility Monitoring Division
APS-430	Maintenance Processors Program, Navigation/Landing and Facility Monitoring Division
APT	Office of Personnel and Technical Training
APT-300	Technical Training Division, Office of Personnel and Technical Training
ARTCC	Air Route Traffic Control Center
ASM	Systems Maintenance Service
ASM-100	Maintenance Engineering Division, Systems Maintenance Service
ASM-150	National Airway Engineering Field Support Sector, Maintenance Engineering Division
ASM-160	National Automation Engineering Field Support Sector, Maintenance Engineering Division
ASM-161	Systems Engineering Branch, National Automation Engineering Field Support Sector
ASM-165	AFSS/RMM Engineering Branch, National Automation Engineering Field Support Sector
ASM-200	Maintenance Operations Division, Systems Maintenance Service
ASM-210	AF Workforce Requirements Program, Maintenance Operations Division
ASM-220	Information Management Program, Maintenance Operations Division

ASM-230 Planning and Budgeting Program, Maintenance Operations Division

ASM-300 Telecommunications Management and Operations

Division, Systems Maintenance Service

ATC Air Traffic Control

BBU Battery Backup Unit

BDL Three-Letter Designator for Windsor Locks AFS

BPI bits per inch

BPS bits per second

BTU British Thermal Unit

CAI Contractor Acceptance Inspection

CBI Computer-Based Instruction

CC Channel and Diagnostic Data Transceiver

CCB Configuration Control Board

CCD Configuration Control Decision

CLIP Communications Line Interface Processors

CM Configuration Management

CO Contracting Officer

COTR Contracting Officer Technical Representative

COTS Commercial-off-the-Shelf

DEN Three-Letter Designator for Denver AFS

DFW Three-Letter Designator for Dallas Ft. Worth AFS

DMN Data Multiplexing Network

DO Delivery Order

6140.15 Appendix 6

DOT Department of Transportation

DRR Deployment Readiness Review

DTW Three-Letter Designator for Detroit AFS

EEM Electronic Equipment Modification

EIA Electrical Industry Association

F Fahrenheit

FAA Federal Aviation Administration

FAI Three-Letter Designator for Fairbanks AFS

FMDT Fixed Maintenance Data Terminal

FSDPS Flight Service Data Processing System

FY Fiscal Year

GNAS General NAS

HVAC Heating, Ventilation and Air Conditioning

Hz Hertz

IAW in accordance with

ICD Interface Control Document

ICT Three-Letter Designator for Wichita AFS

ILSP Integrated Logistic Support Plan

IMCS Interim Monitor and Control Software

in Inch

IP Instruction Processor

IPS inches per second

IRD Interface Requirements Document

JAI Joint Acceptance Inspection

K Thousand

KB Kilobyte

Keysite A system operating in a live NAS environment used

for pre-testing new or modified hardware and/or

software

lbs Pounds

LCN Logistic Control Number

LIU Line Interface Unit

LOA Letter of Agreement

LRU Line Replaceable Unit

ma Milliampere

MB Megabyte

MCS Monitor and Control Software

MCC Maintenance Control Center

MCCP Maintenance Control Center Processor

MDT Maintenance Data Terminal

MEM Three-Letter Designator for Memphis AFS

MMC Maintenance Monitoring Console

MMS Maintenance Management System

MPS Maintenance Processor Subsystem

ms Milli-second

msl mean sea level

MSN Message Switching Network

NADIN National Airspace Data Interchange Network

NAILS National Airspace Integrated Logistic Support

NAILSMT NAILS Management Team

NAPRS NAS Automated Performance Reporting System

NAS National Airspace System

National A site operating in a non-NAS environment which Support provides various types of support to live NAS

Site field facilities

NCC National Communications Center

NCP NAS Change Proposal

NICS National Interfacility Communications System

NMCE Network Management and Control Equipment

NRZI Non-return to Zero Inverted

NS NonStop

NSN National Stock Number

ORF Three-Letter Designator for Norfolk AFS

OSI Open System Interconnect

OSP Operations and Service Processor

OT&E Operational Test and Evaluation

PA Project Authorization

PCB Printed Circuit Board

PDS Proficiency Development Specialist

PE Phase Encoding

PIP Project Implementation Plan

PMDT Portable Maintenance Data Terminal

PSRB Program Status Review Board

PTD Provisioning Technical Documentation

RMMS Remote Maintenance Monitoring System

RMS Remote Monitoring Subsystem

SEIC System Engineering and Integration Contractor

SFO Sector Field Office

SI System Integrator

SMP System Maintenance Processor

SPB Site Program Bulletin

SQ Sequencer and Control Store

SS System Specification

STL Three-Letter Designator for St. Louis AFS

STP Subsystem Training Plan

TMDS Tandem Maintenance Diagnostic System

TMDT Transportable Maintenance Data Terminal

VSCS Voice Switching and Control System

WJF Three-Letter Designator for Edwards AFB

ZAB Three-Letter Designator for Albuquerque ARTCC

ZAN Three-Letter Designator for Anchorage ARTCC

ZAU Three-Letter Designator for Chicago ARTCC

ZBW Three-Letter Designator for Boston ARTCC

ZDC Three-Letter Designator for Washington ARTCC

	the state of the s	•		
ZDV	Three-Letter	Designator	for	Denver ARTCC
ZFW	Three-Letter ARTCC	Designator	for	Dallas Ft. Worth
ZHN	Three-Letter	Designator	for	Honolulu ARTCC
ZHU	Three-Letter	Designator	for	Houston ARTCC
ZID	Three-Letter	Designator	for	Indianapolis ARTCC
zjx	Three-Letter	Designator	for	Jacksonville ARTCC
ZKC	Three-Letter	Designator	for	Kansas City ARTCC
ZLA	Three-Letter	Designator	for	Los Angeles ARTCC
ZLC	Three-Letter	Designator	for	Salt Lake City ARTCC
ZMA	Three-Letter	Designator	for	Miami ARTCC
ZME	Three-Letter	Designator	for	Memphis ARTCC
ZMP	Three-Letter	Designator	for	Minneapolis ARTCC
ZNY	Three-Letter	Designator	for	New York ARTCC
ZOA	Three-Letter	Designator	for	Oakland ARTCC
ZOB	Three-Letter	Designator	for	Cleveland ARTCC
ZSE	Three-Letter	Designator	for	Seattle ARTCC
ZSU	Three-Letter	Designator	for	San Juan ARTCC
ZTL	Three-Letter	Designator	for	Atlanta ARTCC